D.N.R. COLLEGE OF ENGINEERING & TECHNOLOGY
Balusumudi, Bhimavaram–534202

Summary Report of Number of workshops/seminars/ Research Methodology/ Intellectual Property Rights (IPR) and Entrepreneurship

A.Y: 2021-22

Sl. No.	Name of the workshops/seminars/ Research Methodology/ Intellectual Property Rights (IPR) and Entrepreneurship Organized	Date	Number of Participants
1	One day Workshop on Patent Rights	17-08-2021	32
2	A Two day FDP on Intellectual Property rights	16-12-21 to 17-12-21	45
3	A One day Webinar on "Ethical Leadership & Emotional Intelligence"	30-12-2021	65
4	One Week FDP Program on Artificial Intelligence Machine Learning and Internet of Things Applications	6thDec21- 10th Dec 2021	32
5	One day Workshop on Patent Rights	21-09-2021	31
6	A Two Day FDP Program on Artificial Intelligence Machine Learning and Internet of Things Applications	9th & 10th Apr 2022	38
7	One day Workshop on Multi Criteria Decision Making	08-05-2022	39
8	One day Workshops on Research Methodology: Tools & Techniques Using R Programming	02-08-2022	21
9	One day Workshop on Research Paper Writing Using LaTeX tool	06-03-2022	35
10	A workshop on drafting using Tekla by V. Bhaskara Rao, Designlabs,Autodesk Authorised Academic Partner, Hyderabad	22-05-2022	38
11	One Day Workshop on "Entrepreneurship and Start-up for Beginners" by Dr. G. Nagendra	10-10-2021	31
12	One day seminar on "Convert idea to business: A pathway to success "	07-01-22	29
13	Exploring Journey of Entrepreneurship	11-02-22	35

Principal

REPORT ABOUT THE PROGRAMME

Dt: 18-08-2021

Title of the Programme: A One day work shop on "PATENT RIGHTS"

Inauguration Date & Venue: 17th Aug 2021 & DNRCET Seminar Hall

Organized By: Department of Computer Science Engineering, DNRCET

Resource Person: Dr. D. J Nagendra Kumar, Asst. Prof in Dept of Information Technology, VIT AP , Amaravathi.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 32

Concept:

A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application. There are four different patent types:

- Utility patent. This is what most people think of when they think about a patent.
- Provisional patent.
- Design patent.
- Plant patent.

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Balusumudi Bhimavaram – 534202
(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)
(Accredited with B++ Grade by NAAC)
Ph: 08816-221238 Email: dnrcet@gmail.com website:
https://dnrcet.org

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 17-08-2021	
			FN	AN
1	P.Anjaneyulu JD	ECE	P.Anjuneyu	P.Anjuy
2	DR.Nageswara raju Sangaraju	CE	DR.t	DR.t
3	G.Sai Baba	EEE	G.Sai bah	G.Sai bah
4	P.Nagaraju	ECE	P	P
5	M.pandu Ranga Rao	ME	M.Padu Ranga	M.pandu
6	S. chandu Prasad	ANE	C.P	C.P
7	Dr.R.Ramya swetha	CE	P	P
8	M.Lakshmi kumar.	ECE	M.L.k	M.L.k
9	K.V.Subrahamanyam	ECE	k.V.Submy	k.V.Submy
10	Dr.D.Bhanu prakash	ME	P	P
11	B. Shalem	ME	B.S	B.S
12	I.Geetha	ECE	G	G
13	J.keerthana	ECE	JK	JK
14	Dr.M.Anjan kumar	CE	AK	AK
15	M.Srinu	ECE	Snh	Snin
16	M.Vijay daniel	ME	VD	VD
17	G. suribabu	ECE	SB	SB
18	M.Jhambi babu	ME	JB	JB

One day Workshop on Patent Rights On 17th Aug 2021

1

19	D.Joseph kumar	EEE	Joseph kum	Joseph kum.
20	Dr.I.Harish	ME	H	H
21	N.V.S.L.Sowjanya	ECE	N.V.S.L.Souj	N.V.S.L.Souj.
22	Dr. MD.Ahasan	ME	Ahasan	Ahasan
23	I.Geetha	CSE	⊕	⊕
24	M.Venkta krishna	ECE	M.Venkkrish	M.Venk krish.
25	M.srinu	ECE	S	S
26	B.Suresh kumar	ME	B.Suresh	B.Suresh.
27	G.Vamsi Krishna	ME	R	R
28	M.Naga lakshmi	CSE	M.Naga	M.Naga.
29	D.Y.Maruthi kumar	ME	MK	MK
30	K. surga s.kuma	ME	SK	SK
31	Dr.KBVSR Subrahmanyam	ECE	Dr.t	Dr.t
32	T.prasanth	ECE	T.prasanth	T.prasanth.

M.Arjanu
PRINCIPAL

M.Arjankumar

PROFILE

Dr.D.J.NAGENDRA KUMAR

Professor & Head

CURRENT POSITION:

Dean, Statutory Affairs

Professor&Head,

Department of Information Technology

EDUCATION:

Ph.D.   from   JNTUH,

M.Tech   from   ANDHRA UNIVERSITY

MCA   from   ANDHRA UNIVERSITY

RESEARCH INTEREST:

- Data Mining

- Machine Learning, Genetic Programming

Present Working in Vishnu engineering college bhimavaram

Bhimavaram

What Is a Patent?

A patent safeguards an original invention for a certain period of time and is granted by the United States Patent and Trademark Office (USPTO). By granting the right to produce a product without fear of competition for the duration of the patent, an incentive is provided for companies or individuals to continue developing innovative new products or services.

There are three types of patents: utility patents, plant patents, and designpatents.

Utility Patent

A utility patent covers the creation of a new or improved product, process, or machine. Also known as a "patent for invention," it bars other individuals or companies from making, using, or selling the creation without consent. Utility patents are good for up to 20 years after the patent application is filed, but require the holder to pay regularly scheduled maintenance fees.

While most people associate patents with machines and appliances, they can also apply to software, business processes, and chemical formulations such as in pharmaceutical products.

Plant Patent

A plant patent protects a new and unique plant's key characteristics from being copied, sold, or used by others. It is also good for 20 years after the application is filed. The plant must be asexually reproducible with reproduction being genetically identical to the original and performed through methods such as root cuttings, bulbs, division, or grafting and budding.

Design Patent

A design patent, on the other hand, applies to the unique look of a manufactured item. Take, for example, an automobile with a distinctive hood or headlight shape. These visual elements are part of the car's identity and may add to its value; however, without protecting these components with a patent, competitors could potentially copy them without legal consequences.

Design patents issued since May 2015 last for 15 years from the date the patentis granted and do not require maintenance fees. Patents issued prior to that lastfor 14 years.

What Is a Trademark?

Unlike patents, a trademark protects words and design elements that identify the source of a product. Brand names and corporate logos are primary examples. A service mark is similar, except that it safeguards the provider of a service instead of a tangible good. The term "trademark" is often used in reference to both designations.

Some examples of trademark infringement are fairly straightforward. You'll probably run into trouble if you try to bottle a beverage and call it Coca-Cola or even use the famous wave from its logo since both have been protected for decades.

However, a trademark actually goes a bit further, prohibiting any marks that have a "likelihood of confusion" with an existing one. Therefore, a business can't use a symbol or brand name if it looks similar, sounds similar, or has a similar meaning to one that's already on the books, at least if the products or services are related If the trademark holder believes there's a violation of these rights, it may decide to sue.67

What Is a Copyright?

Copyrights protect "original works of authorship," such as writings, art, architecture, and music. For as long as the copyright is in effect, the copyright owner has the sole right to display, share, perform, or license the material.8

One notable exception is the "fair use" doctrine, which allows some degree of distribution of copyrighted material for scholarly, educational, or news-reporting purposes.9

Technically, you don't have to file for a copyright to have the piece of work protected. It's considered yours once your ideas are translated into a tangible form, such as a book, music, or published research; however, officially registering with the U.S. Copyright Office before—or within five years of—publishing your work makes it a lot easier to establish that you were the original author if you ever have to go to court.

The duration of a copyright depends on the year it was created, as the laws have changed over the years. Since 1978, most compositions have been copyright- protected for 70 years after the author's death. After that time, individual works enter the public domain and can be reproduced by anyone without permission.

As a general rule, the author retains ownership of copyright privileges, even if the material is published by another company. There is an important exception to this rule, though.

Materials you create for your employer as part of your job requirements, for example, contributions to a podcast the company publishes, are usually considered "works for hire." The employer, not you, retains the copyright. If there's a gray area, you can try to negotiate with the publisher over copyright ownership prior to creating the piece; just be sure to get it in writing.11

What Is the Difference Between a Patent, Copyright, and Trademark?

A patent protects new inventions, processes, or scientific creations, a trademark protects brands, logos, and slogans, and a copyright protects original works of authorship.

What Are the 3 Types of Patents?

The three types of patents are design, utility, and plant. Utility patents are for new discoveries, compositions of matter, machines, or processes. Plant patents are for anyone that discovers or develops and asexually reproduces a new variety of plant. A design patent is for anyone that creates a new, original, and ornamental design.2

What Is Included in a Trademark?

A trademark includes words, phrases, designs, or any combination of these that particularly identify a good or service.7

The Bottom Line

The decision to pursue a patent, trademark, or copyright depends on the type of intellectual property you're trying to shield. Whether it's a new product, logo, or creative work, registering your idea with the appropriate body can help ensure you enjoy the fruits of your labor.

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REPORT ABOUT THE PROGRAMME

Dt: 18-12-2021

Title Of The Programme: A Two day FDP on Intellectual Property Rights

Inauguration Date & Venue: 16th Dec 2021 & DNRCET Seminar Hall

Organized By: Department of Computer Science Engineering, DNRCET

Resource Person: Dr. M. Akhila Rani, Professor in CSE, BVCITS, Amalapuram.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 45

Concept:

Intellectual property rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time. Intellectual property rights are legal rights that provide creators protection for original works, inventions, or the appearance of products, artistic works, scientific developments, and so on. Basically speaking, intellectual property rights are a common type of legal IP protection for those who invent. 5 common types of intellectual property

- Copyright. Copyright protects creative works like computer code, photographs, artwork, and text.
- Moral Rights. Moral rights are related to copyright.
- Trademarks. Trademarks offer protection for your branding.
- Patents. A patent stops others from making your invention.
- Trade Secrets.

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Department of Electronics & Communication Engineering

A TWO DAY's FDP ON INTELLECTUAL PROPERTY RIGHTS
(16-12-21 to 17-12-21)

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 16-12-2021		Date 17-12-2021	
			FN	AN	FN	AN
1	N. Tawahee Babu	BS&H				
2	K.Sekhar Babu	ECE				
3	Dr A. Ramamurty	CSE				
4	P. L. Kumar	Civil				
5	K.v. Subrahmanya	Civil				
6	K. venkata chandan	CSE				
7	G.VSS mrew	CSE				
8	NSVL Soujanya	ECE				
9	P-Naga Raju	EEE				
10	M.Sairam	EEE				
11	V. Praveen	SE&H				
12	K.Venkanna Naidu	ECE				
13	G. Mosy	S&H				
14	S.Chandu prasad	MECH				
15	Dr.Y.M.kumar	MECH				
16	G.Vamsi Krishna	MECH				
17	M D Nailup	MBA				
18	K. S R Prasad	CSE				

#	Name	Dept	Sign	Sign	Sign	Sign
19	K chandelika	MBA				
20	KSVN Satyanarayan	MBA				
21	N. Bharathi	CSE				
22	CH. Renukadevi	S&H				
23	V.PNV kumari	BS&H				
24	P.Lalitha	CSE				
25	B Heshaalya	BS&H				
26	B Vamsidhar	BS&H				
27	Dr.A Padmanabham	BSH				
28	V. Bhavani Durga	ECE				
29	M.Hemalatha	ECE				
30	BV Ram Kum	CSE				
31	Dr.A.L Ratan	BS&H				
32	K.S.Syamala	CSE				
33	V. Balaji	ECE				
34	G.S.Babu	ECE				
35	R Grivalli	ECE				
36	M.Uma Suseela	ECE				
37	S. Kateswari	ECE				
38	V. Srinivas	ECE				
39	T. HARISH	MECH				
40	N.Merryleenu	ECE				
41	K. Pratith kumar	ECE				
42	R Abhigna	ECE				

43	.C.Apparao	ECE				
44	C.Rajeswari	ECE				
45	D.J.Daniel	Mech				

HOD-ECE

3

PROFILE

Name of the faculty	Dr.M.AKILA RANI	
Designation	Professor	
Date Of Joining	02/01/2019	
AY	2018-2020	
Responsibility in Committees	1.Innovative and R & D and Consultancy Cell member 2. Academic committee member 3. Women grievance cell member	
Counseling/Mentoring	-	
Courses handled/List of Instructional materials prepared	**Courses handled** 1.Computer Networks 2. Cryptography and Network Security 3. Machine Learning **Course Files Prepared:** 1. Cryptography and Network Security 2. Machine Learning	
Innovative T/L methodologies	Used 10 Different Teaching Methodologies 1.White Board and Marker 2.PPT 3.Lecture-Demonstration 4.Seminar 5.Web Reference 6.Video Lectures,NPTEL 7.Enquiry Based Education 8.Co Operative Learning 9.Brain Storming 10.Quiz	
Professional Memberships	1.IETI-(2019) 2.IAENG-Member No: 237285 3.ACS-Membership Number: 32443416	
Research Publications (Paper/Poster/book/book chapters/citations/etc)	**Research Publications** 1. "A STUDY ON KNOWLEDGE DISCOVERY OF RELEVANT WEB SERVICES WITH SEMANTIC AND SYNTACTIC APPROACHES",Published on International Journal of Computers &Technology ,Volume 4 No. 1, Jan - Feb, 2013. ISSN:2277-3061,**DOI:https://doi.org/10.24297/ijct.v4i1a.3026** 2. "HYBRID APPROACH FOR GENERATING NON OVERLAPPED SUBSTRING USING GENETIC ALGORITHM",Published on	

International Journal of Research in Engineering and Technology eISSN: 2319-1163 , pISSN: 2321-7308, Volume: 03 Issue: 05, May 2014.**URL:https://ijret.org/volumes/2014v03/i05/IJRET201403050 45.pdf**

3. "AN INTERACTIVE MODEL FOR GEORESOURCE SOLUTION SEEKING USING ONTOLOGY "Published on International Journalof Engineering and Technical Research (IJETR),ISSN: 2321-0869,Volume-2, Issue-5, May 2014.**URL:https://www.erpublication.org/published_paper/IJETR 021852.pdf**

4. "A HEURISTIC SYSTEM FOR GEORESOURCE SOLUTION SEEKING USING ONTOLOGY "Published on International Journal of Artificial Intelligent and machine Learning(CIIT) ,Volume 6,No 2,2014.**URL:http://www.ciitresearch.org/dl/index.php/aiml/article/ view/AIML022014005**

5. "IDENTIFYING AND REPLACING WEBSERVICE USING SERVICE COMPOSITION "Published on International Journal of Computer Science and Mobile Computing, Vol.3 Issue.11, November-2014, pg. 407-413.ISSN 2320–088X, **URL:https://www.ijcsmc.com/docs/papers/November2014/V3I112 01457.pdf**

6. "PLAUSIBLY DENIABLE ENCRIPTION OF DATA STORAGE AS HIDDEN FOLDER IN CLOUD "Published on Journal of ComputerScience and Information Technology, Vol. 3, Issue. 11, November2014, pg.351 – 355.ISSN 2320–088X, **URL:https://www.ijcsmc.com/docs/papers/November2014/V3I112 01488.pdf**

7. "DEPENDABILITY AND REPLACABILITY FOR COMPOSITE OF WEB SERVICES "Published on International Journal of Emerging Technology and Innovative Engineering Volume I, Issue 3, March 2015.ISSN: 2394 – 6598, **URL: http://www.ijetie.org/articles/IJETIE_201513041.pdf**

8. "ACCURACY OF LEARNING DATA THROUGH NEW BREED OF WEB BASED APPLICATION USING SYNTACTIC APPROACH" Published on International Journal of Soft Computing, Volume 10,issue2, 2015,pg.157-162.ISSN : 1816-9503. **DOI:http://dx.doi.org/10.36478/ijscomp.2015.157.162, URL: https://medwelljournals.com/abstract/?doi=ijscomp.2015.157.162**

9. "OPTIMIZED SERVICE SELECTION IN WEB SERVICE DISCOVERY "Published on International Journal of Applied Engineering Research.**ISSN 0973-4562** Volume 10, Number 10 (2015) pp.27425-27431. **URL:https://www.ripublication.com/Volume/ijaerv10n10.htm**

10. "WEB MINING FOR POTENTIALLY VALUE ADDED SERVICES", Published on Asian Journal of Information Technology, vol. 15, no. 16, pp. 2908-2962, ISSN:1682-3915. **DOI: http://dx.doi.org/10.36478/ajit.2016.2908.2926 URL:https://medwelljournals.com/abstract/?doi=ajit.2016.2908.29 26**

11. "DATA LOCALITY AWARE FAST AND SECURED RETRIEVAL OF WEB SERVICES USING SECURE SERVICE DISCOVERY

	SYSTEM IN HADOOP", **Published on Transylvanian Review: vol. 24, no. 10, pp 2345-2360.** 12. "DESIGN OF MACHINE LEARNING BASED SUICIDE RATE PREDICTION SYSTEM", Published on International Journal of Scientific Research and Review, Vol. 8, Issue 4, April 2019, and pp.474-477, **ISSN: 2279-543X.** **DOI:http://www.dynamicpublisher.org/gallery/62-ijsrr- d-1769.f.pdf**	
Projects guided	2018-19	Car evaluation prediction
	2019-20	Frequent item Recommender system
		Prediction of Loan Approval Using Machine Learning
List of Working models / Products developed / Incubation/start – ups & List of projects received seed money	3	
List of projects received seed money	INR 5000	
List of NPTEL courses certification done	1. Cloud Computing [NPTEL] 2. Completed What is Data Science?from IBMin **coursera.** 3. Completed Home Networking basics in **Coursera**. 4. Completed Machine Learning A-Z Python & R in Data Science provided by**Udemy.** 5. Completed Top 5 Machine Learning libraries in Python provide by**Udemy.** 6. Completed Linear regression with Numpy and pythonan online non-credit course authorized by Coursera Project Network and offered through **Coursera**	
Incentives/Award/Reward/Recognitions by university	1. Got ELITE in Cloud Computing [NPTEL-AY:2019-2020]	
Faculty Development programs attended /Organized /resource person	1. Faculty Development Program on "Machine learning for beginners" organized by Sphoorthy Engineering College, Hydrabad, 3rd May 2020. 2. Faculty Development Program on **"Data Science using R",** dated from **28th May 2020 to 30th May 2020.** Organized by Department of MCA, K. K. Wagh Institute of Engineering Education and Research, Nashik . 3. **One week National FDP** and online training on Moodle Learning Management System organized by Spoken Tutorial project, **IIT Bombay, 27th April – 2nd May 2020.** 4. One Week Faculty Development Program on "**Arduino**" organized by Electronics & Telecommunication Engineering Department of Sou. VenutaiChavan Polytechnic, Pune in association with Spoken Tutorial IIT Bombay from **25th May 2020 to 29th May 2020.** 5. "R test" organized at SKN Sinhgad College of Engineering, Korti-Pandharpur by PRAKASH RAMESH GADEKAR with course material provided by the Spoken Tutorial Project, IIT Bombay.This training is offered by the Spoken Tutorial Project, IIT Bombay, funded by National Mission on Education through ICT, MHRD, Govt., of India, **May 2020.** 6. Faculty Development Programme (online live instructor-led) on "**Machine Learning and its Applications**" conducted by Electronics and ICT academy, IIT ROORKEE, 5th May – 14th May, 2020. 7. Completed 60 contact hours faculty Development Program on "Data	

	Science" conducted by APSSDC and Excel R, held from **1st June -30th June** 2020. 8. Participated in 5days FDP on "Natural Language Processing Behind Data Science. From 22nd June – 26th june, 2020. 9. Faculty Development Program "**Machine Learning and Data Science for Engineering Applications**" from **5 th June 2020 - 10th June 2020**, Organized by Department of CSE & IT, Shadan College of Engineering and Technology, Hyderabad. 10. Participated in "**Data Analyst/Business Analyst course training**" conducted by APSSDC and Excel R, held from **8th August- 24th September 2020**. 11. Participated in "Android Application Development Bootcamp, Conducted by Codegnan IT solutions OPC PVT.LTD ,from **27th July – 6th August, 2020** 12. 1 Week HANDS-ON Faculty Development Program on "**Artificial Intelligence using Python**"organised by the Department of Information Technology, CMR Engineering College, Hyderabad in association with Brainovision Solutions India Pvt.Ltd. & National Youth Council of India held from **14th September 2020 to 19th September 2020**. 13. Participated in "**Simplifying Data Science With Machine Learning**" Virtual training program conducted by APSSDC and Excel R, held from **28th September To 12th October,2020**. 14. Participated in "**Simplifying Artificial Intelligence and Deep Learning for Students and Professionals**" Virtual training program conducted by APSSDC and Excel R, held from **13th October to 23rd October, 2020**
Conferences/Seminars/Workshop attended/organised	1. Webinar on "Employability Skills In Curriculum Design",**26th April 2020**. 2. Webinar on "IOT Using Arduino", **24th May 2020**. 3. CHALLENGES IN RESEARCH : PUBLICATIONS & ETHICS, **3rd May,2020**. 4. Webinar on "Art of writing research papers" organized by CIT on **29th April ,2020**. 5. "Developing Thinking Abilities Relevant for Engineering Education",**28th April,2020**. 6. "Get Ready for AI using MATLAB & Simulink" organised in association with Design Tech Systems Pvt. Ltd. Pune by Department of Electronics & Telecommunication Engineering on **27th & 28th July 2020**. 7. Webinar on " Blockchain 2.0- A shift from Bitcoin to Real world applications, **3RD August 2020**. 8. "**International Workshop on Deep Learning (IWDL)**" for 5 days, **22nd August to 26th August**., presented by GOAL street, BITS Pilani, Hydrabad Campus.
ICT USAGE: webpage/blog/google classroom/LMS etc.	1.LMS[Great Learning]:https://olympus.greatlearning.in/courses/17701 2.LMS [BYNDR]: akilakamalam@gmail.com 3. Blog:https://akilarani.blogspot.com/
Ph.D enrolled/ awarded / guided	AwardedPh.Din the faculty of Information and Communication from Anna University, Chennai in the year of 2018 under the guidance of Dr.D.Shanthi, Prof/Head, Department of CSE, PSNACET, Dindigul, Tamil nadu,India.
Invited Lectures (Expert/conference/etc)	1.Invited as Guest Lecture "Core Java Technologies" at N.P.R.College of Engineering and Technology, Dindigul,Tamil Nadu 2.Invited as **Guest of Honor**" in Association Ingurationfuction on 20.07.18 for the Department of Information Technology at Madurai SivakasiNadars Pioneer Meenakshi Women's College, Madurai, Tamil

	Nadu.and given guest lecture on **"Internet of Things"**. 3.**Session Chair** in **International Conference** on Intelligent Computing and Control Systems (ICICCS 2018) at The Vaigai College Engineering (VCE), Madurai, Tamil Nadu, 15 June 2018. 4. **Session Chair** in **International Conference** on Computer Networks, Big Data and IoT (ICCBI 2018) at The Vaigai College Engineering (VCE), Madurai, Tamil Nadu, 20 December 2018.
Industrial visits / Trainings / Internships organised	NO
List of In-house/Funded / Consultancy activities for R&D projects/documentation	Worked as a part of the team on the invention and **Patent** of "Optimization Method for Machine Learning Based Clustering of Serial Big data". Application No:2019410436004
International fellowship for advanced studies/research	NO
Previous Experience	Worked as Lecturer in Pandian Saraswathi Yadav Engineering college, Sivagangai District, Tamil Nadufrom May 2008 to June 2011. Worked as Assistant Professor in NPR College of Engineering and Technology,Natham, Dindigul District, Tamil Nadu from June 2011 to November 2017. Worked as Assistant Professor in Vaigai College of Engineering,Melur, Madurai District, Tamil Nadu from January 2018 to December 2018.

1.

Interllectual Property Right

Intellectual property rights (IPR) have been defined as ideas, inventions, and creative expressions based on which there is a public willingness to bestow the status of property. IPR provide certain exclusive rights to the inventors or creators of that property, in order to enable them to reap commercial benefits from their creative efforts or reputation. There are several types of intellectual property protection like patent, copyright, trademark, etc. Patent is a recognition for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial application. IPR is prerequisite for better identification, planning, commercialization, rendering, and thereby protection of invention or creativity. Each industry should evolve its own IPR policies, management style, strategies, and so on depending on its area of specialty. Pharmaceutical industry currently has an evolving IPR strategy requiring a better focus and approach in the coming era.

Intellectual property (IP) pertains to any original creation of the human intellect such as artistic, literary, technical, or scientific creation. Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of time. These legal rights confer an exclusive right to the inventor/creator or his assignee to fully utilize his invention/creation for a given period of time. It is very well settled that IP play a vital role in the modern economy. It has also been conclusively established that the intellectual labor associated with the innovation should be given due importance so that public good emanates from it. There has been a quantum jump in research and development (R&D) costs with an associated jump in investments required for putting a new technology in the market place.

The stakes of the developers of technology have become very high, and hence, the need to protect the knowledge from unlawful use has become expedient, at least for a period, that would ensure recovery of the R&D and other associated costs and adequate profits for continuous investments in R&D.[3] IPR is a strong tool, to protect investments, time, money, effort invested by the inventor/creator of an IP, since it grants the inventor/creator an exclusive right for a certain period of time for use of his invention/creation. Thus IPR, in this way aids the economic development of a country by promoting healthy competition and encouraging industrial development and economic growth. Present review furnishes a brief overview of IPR with special emphasis on pharmaceuticals.

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The laws and administrative procedures relating to IPR have their roots in Europe. The trend of granting patents started in the fourteenth century. In comparison to other European countries, in some matters England was technologically advanced and used to attract artisans from elsewhere, on special terms. The first known copyrights appeared in Italy. Venice can be considered the cradle of IP system as most legal thinking in this area was done here; laws and systems were made here for the first time in the world, and other countries followed in due course. Patent act in India is more than 150 years old. The inaugural one is the 1856 Act, which is based on the British patent system and it has provided the patent term of 14 years followed by numerous acts and amendments.

- it provides a mechanism of handling infringement, piracy, and unauthorized use
- it provides a pool of information to the general public since all forms of IP are published except in case of trade secrets.

IP protection can be sought for a variety of intellectual efforts including

(i) Patents

(ii) Industrial designs relates to features of any shape, configuration, surface pattern, composition of lines and colors applied to an article whether 2-D, e.g., textile, or 3-D, e.g., toothbrush

(iii) Trademarks relate to any mark, name, or logo under which trade is conducted for any product or service and by which the manufacturer or the service provider is identified. Trademarks can be bought, sold, and licensed. Trademark has no existence apart from the goodwill of the product or service it symbolizes

(iv) Copyright relates to expression of ideas in material form and includes literary, musical, dramatic, artistic, cinematography work, audio tapes, and computer software

(v) Geographical indications are indications, which identify as good as originating in the territory of a country or a region or locality in that territory where a given quality, reputation, or other characteristic of the goods is essentially attributable to its geographical origin

A patent is awarded for an invention, which satisfies the criteria of global novelty, non-obviousness, and industrial or commercial application. Patents can be granted for products and processes. As per the Indian Patent Act 1970, the term of a patent was 14 years from the date of filing except for processes for preparing drugs and food items for which the term was 7 years from the date of the filing or 5 years from the date of the patent, whichever is earlier. No product patents were granted for drugs and food items.

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A copyright generated in a member country of the Berne Convention is automatically protected in all the member countries, without any need for registration. India is a signatory to the Berne Convention and has a very good copyright legislation comparable to that of any country. However, the copyright will not be automatically available in countries that are not the members of the Berne Convention. Therefore, copyright may not be considered a territorial right in the strict sense. Like any other property IPR can be transferred, sold, or gifted

Role of Undisclosed Information in Intellectual Property

Protection of undisclosed information is least known to players of IPR and also least talked about, although it is perhaps the most important form of protection for industries, R&D institutions and other agencies dealing with IPR. Undisclosed information, generally known as trade secret or confidential information, includes formula, pattern, compilation, programme, device, method, technique, or process. Protection of undisclosed information or trade secret is not really new to humanity; at every stage of development people have evolved methods to keep important information secret, commonly by restricting the knowledge to their family members. Laws relating to all forms of IPR are at different stages of implementation in India, but there is no separate and exclusive law for protecting undisclosed information/trade secret or confidential informationPressures of globalisation or internationalisation were not intense during 1950s to 1980s, and many countries, including India, were able to manage without practising a strong system of IPR. Globalization driven by chemical, pharmaceutical, electronic, and IT industries has resulted into large investment in R&D. This process is characterized by shortening of product cycle, time and high risk of reverse engineering by competitors. Industries came to realize that trade secrets were not adequate to guard a technology. It was difficult to reap the benefits of innovations unless uniform laws and rules of patents, trademarks, copyright, etc. existed. That is how IPR became an important constituent of the World Trade Organization (WTO).

Rationale of Patent

Patent is recognition to the form of IP manifested in invention. Patents are granted for patentable inventions, which satisfy the requirements of *novelty* and *utility* under the stringent

examination and opposition procedures prescribed in the Indian Patents Act, 1970, but there is not even a *prima-facie* presumption as to the validity of the patent granted.

Most countries have established national regimes to provide protection to the IPR within its jurisdiction. Except in the case of copyrights, the protection granted to the inventor/creator in a country (such as India) or a region (such as European Union) is restricted to that territory where protection is sought and is not valid in other countries or regionsFor example, a patent granted in India is valid only for India and not in the USA. The basic reason for patenting an invention is to make money through exclusivity, i.e., the inventor or his assignee would have a monopoly if,

- the inventor has made an important invention after taking into account the modifications that the customer, and
- if the patent agent has described and claimed the invention correctly in the patent specification drafted, then the resultant patent would give the patent owner an exclusive market.

The patentee can exercise his exclusivity either by marketing the patented invention himself or by licensing it to a third party.

The following would not qualify as patents:

- An invention, which is frivolous or which claims anything obvious or contrary to the well established natural law. An invention, the primary or intended use of which would be contrary to law or morality or injurious to public health
- (ii) A discovery, scientific theory, or mathematical method
- (iii) A mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine, or apparatus unless such known process results in a new product or employs at least one new reactant
- (iv) A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance
- (v) A mere arrangement or re-arrangement or duplication of a known device each functioning independently of one another in its own way
- (vi) A method of agriculture or horticulture
- (vii) Any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products

- (viii) An invention relating to atomic energy
- (ix) An invention, which is in effect, is traditional knowledge

Rationale of License

A license is a contract by which the licensor authorizes the licensee to perform certain activities, which would otherwise have been unlawful. For example, in a patent license, the patentee (licensor) authorizes the licensee to exercise defined rights over the patent. The effect is to give to the licensee a right to do what he/she would otherwise be prohibited from doing, i.e., a license makes lawful what otherwise would be unlawful.

The licensor may also license 'know-how' pertaining to the execution of the licensed patent right such as information, process, or device occurring or utilized in a business activity can also be included along with the patent right in a license agreement. Some examples of know-how are:

- (i)technical information such as formulae, techniques, and operating procedures and
- (ii)commercial information such as customer lists and sales data, marketing, professional and management procedures.

Indeed, any technical, trade, commercial, or other information, may be capable of being the subject of protection.

Benefits to the licensor:

- (i) Opens new markets
- (ii) Creates new areas for revenue generation
- (iii) Helps overcome the challenge of establishing the technology in different markets especially in foreign countries – lower costs and risk and savings on distribution and marketing expenses

Benefits to the licensee are:

- (i) Savings on R&D and elimination of risks associated with R&D
- (ii) Quick exploitation of market requirements before the market interest wanes
- (iii) Ensures that products are the latest

The Role of Patent Cooperation Treaty

The patent cooperation treaty (PCT) is a multilateral treaty entered into force in 1978. Through PCT, an inventor of a member country contracting state of PCT can simultaneously obtain priority for his/her invention in all or any of the member countries, without having to file a separate application in the countries of interest, by designating them in the PCT application. All activities related to PCT are coordinated by the world intellectual property organization (WIPO) situated in Geneva

In order to protect invention in other countries, it is required to file an independent patent application in each country of interest; in some cases, within a stipulated time to obtain priority in these countries. This would entail a large investment, within a short time, to meet costs towards filing fees, translation, attorney charges, etc. In addition, it is assumed that due to the short time available for making the decision on whether to file a patent application in a country or not, may not be well founded

Inventors of contracting states of PCT on the other hand can simultaneously obtain priority for their inventions without having to file separate application in the countries of interest; thus, saving the initial investments towards filing fees, translation, etc. In addition, the system provides much longer time for filing patent application in the member countries

The time available under Paris convention for securing priority in other countries is 12 months from the date of initial filing. Under the PCT, the time available could be as much as minimum 20 and maximum 31 months. Further, an inventor is also benefited by the search report prepared under the PCT system to be sure that the claimed invention is novel. The inventor could also opt for preliminary examination before filing in other countries to be doubly sure about the patentability of the invention.

Management of Intellectual Property in Pharmaceutical Industries

More than any other technological area, drugs and pharmaceuticals match the description of globalization and need to have a strong IP system most closely. Knowing that the cost of introducing a new drug into the market may cost a company anywhere between $ 300 million to $1000 million along with all the associated risks at the developmental stage, no company will like to risk its IP becoming a public property without adequate returns. Creating, obtaining, protecting, and managing IP must become a corporate activity in the same manner as the raising of resources and funds. The knowledge revolution, which we are sure to witness, will demand a special pedestal for IP and treatment in the overall decision-making process.

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REPORT ABOUT THE PROGRAMME

Dt: 31-12-2021

Title Of The Programme: A One day Webinar on "Ethical Leadership & Emotional Intelligence"

Inauguration Date & Venue: 30th Dec 2021 & DNRCET Seminar Hall

Organized By: Department Of Computer Science Engineering, DNRCET

Resource Person: Dr. A. S. Narayana, Professor in MBA, BVCITS, Amalapuram.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 65

Concept:

Many of us will have experienced ethical leadership - alternatively, some of us will have experienced a lack of ethical leadership in our professional lives. Having people in place at the very top will determine what kind of leadership style is in place. Ethical leaders give way to employees by inspiring, developing and creating a culture of trust and respect.

Emotional intelligence is defined as the ability to understand and manage your own emotions, as well as recognize and influence the emotions of those around you. The term was first coined in 1990 by researchers John Mayer and Peter Salovey, but was later popularized by psychologist Daniel Goleman. Emotional intelligence is typically broken down into four core competencies:

1. Self-awareness
2. Self-management
3. Social awareness
4. Relationship management

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Balusumudi Bhimavaram – 534202

(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

(Accredited with B++ Grade by NAAC)

Ph: 08816-221238 Email: dnrcet@gmail.com website:

https://dnrcet.org

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 30/12/2021	
			FN	AN
	A One day Webinar on "Ethical Leadership & Emotional Intelligence, 30/12/2021			
1	J.keerthana	ECE	J.keeth	J.keeth
2	M. Lakshmi kumar	ECE	M.Lakshmi	M.Lakhmi
3	P. Anjaneyulu JO	ECE	P. Anjo	P. A
4	M. srinu	EEE	M.S	M.S
5	M.pandu ranga rao	ME	Pro	T
6	V. Bhavana Durga	EEE	BD	BD
7	k.vs. sirisha	BSH	8	4
8	V.R.E.SS, kumar	MBA	8	4
9	K.v.Subrahmanyam	ECE	K.V.Suba	K.V.Sub
10	D. Joseph kumar	EEE	P.JR	P.JR
11	Dr.D.Bhanu prakash	ME	Bhanu	Bhanu
12	Dr.Md Ahhasan	ME	A	X
13	Ch. Renuka Devi	BSH	Ch. Renuka	Renuka
14	Dr.A.Purna Ramesh	ECE	A	A
15	M.Venkata krishna	ECE	M.V.kru	M.V.k
16	S. Sridevi	ECE	S	S
17	V. Praveen	BSH	Praveen	V. Praveen
18	G. Saibaba	EEE	G.S	G.S
19	B. Suresh kumar	ME	B	
20	M.Vijay Daniel	ME	M.Vij	M.vij
21	K.Sudip Satish kumar	ECE	S	S
22	k.Sekhar Babu	ECE	k.Sekh	k.Sekh
23	P.Jayalakshmi	ECE	J	J
24	Dr.Nageswara Raju Sangaraju	CE	Nageswara	Nagawara
25	Gvg sriram	CSE	8	8
26	V. prasad	BSH	prasad	prasad
27	N. Jawharbabu	BSH	J	J
28	V. Balaji	ECE	V.Bala	v. Bal
29	D.Y. Maruthi kumar	ME	D	D
30	p. Naga Raju	EEE	P.N.R	P.N.R
31	Priyanka nagavenkata	BSH	J	J
32	K.S.V.N Satyanarayana	K.S.Narayana	K.S Narayana	Narayana
33	Dr. GG Ratham	BSH	D	D
34	B.Shalem	ME	B.Shalem B.Shal	B.Shal
35	T. prasanth	ECE	T. Prasanth M.Ali Prasanth	T. Prasanth

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36	G. Vamsi Krishna	ME		
37	G. Suri babu	ECE		
38	E. Rama Lakshmi	ECE	Ranya	Ranya
39	MRC. M.N. Lakshmi	CSE		
40	Dr. A. Padhmanabham	BSH	padhmanabham	
41	K.A.S.V.R Gaiphavan	BSH	Sai	
42	Dr. K.B.V.SR Subrahmanyam	EEE	P.	
43	M. Thambi Babu	ME	M. Thambi	M.
44	U. Suchmitha	CCE	U. Sushmith	U. Sushm
45	Dr. A. Ramamurthy	CSE		
46	P. Lalitha	CSE	P. lalith	P. lalit
47	K.V.S. Sirisha.	BSH		
48	E. Yohasva	CSE	E. yohasya	E. yohasva
49	M. Sridu	EEE	M.S.	M.S.
50	B. Suresh Kumar	ME		
51	Dr. R. Ramya Swetha	CE	Ramya Swetha	Ramya swetha
52	Dr. I. Harish	ME		
53	N. Bharathi	CSE	N.B	N.B
54	P. Naga Raju	EEE	P. Naga	P. Naga
55	N. Mary Veena	ECE		
56	I. Geetha	ECE	I. Geeth	I. Geeth
57	B. Vamsidhar	BSH	B. vansidhar	B. vansidhar
58	Dr. Harish	ME		
59	S. Chandu prasad	ME	S. Chandu	S. Chandu
60	G. Koteswararao	ECE	G.	G.
61	K. Siva Syamala	CSE	K.S Syamala	
62	M. Gopala	BSH		
63	Dr. M. Anjan kumar	CE	Anjan kumar	Anjan kumar
64	Y. Srinivas	ECE		
65	P. Jaya lakshmi	BSH	P.J. lakshmi	P. Jaya

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Dr. ACHANTA SATYANARAYANA

M.Com.,MBA.,M.Phil.,Ph.D.

Professor Satyanarayana Achanta has been with us for the last 10 years as a Professor and Head of Department for MBA, who also holds a PhD in Financial Management. He is responsible for the IQAC Committee and College Academic Committee.

He has been instrumental in preparing and handling various courses for the department, such as:

1. Business Research Methodology

2. Risk Management

3. Advanced Management Accounting

4. Business Environment

He has numerous International Journals and projects to his credit, which include:

1. Outsourcing Financial Analysis of Human Resources management based on Decision Making Standards

2. Dynamic Capabilities for Strategy of Human resource management for Management System

3. Financial Performance of State Level Public Enterprises in Andhra Pradesh.

4. Analysing the Supply Chain Model of Small and Medium Enterprises Financing

5. A Study on Comparative Analysis of Assets and Liabilities at Lakkavaram, Andhra Pradesh.

Apart from this, he has been instrumental in guiding MBA students with their research projects in the area of Finance.

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He has completed 12 weeks NPTEL Online Courses on:

1. Financial Statement Analysis & Reporting

2. Working Capital Management

3. Developing Personality & Soft Skills

He has been an active attendee and organiser of multiple Seminars and workshops, such as:

1. Workshop on 'Campus to Corporate' at Swarnandhra Group of Colleges

2. Workshop on 'Demonetization and Digital Economics' at SKBR College, Amalapuram

3. Workshop on 'Research Methodology & Report Drafting - Commerce, Management, and Social Sciences' at Adikavi Nanayya University

4. National Workshop on 'Methodology for Management & Commerce Research"

Ethical Leadership and Emotional Intelligence

This chapter will reflect on two themes that have increased in popularity in the past few decades: ethical behavior at work—particularly important when reviewed in light of the corporate scandals of recent years—and emotional intelligence—a growing area of interest in a world of work where there is increased diversity, cultural blend, accelerating ambiguity, and augmenting awareness among workforce members. First, the topic of ethics will be discussed, with specific focus on leadership ethics and organizational ethics. Subsequently, emotional intelligence will be reviewed, with some comments on emotional and intellectual intelligence. In the final part of the chapter, the interplay between ethics and emotional intelligence will be discussed.

Introduction

Two terms have earned increasing interest in the past decades in the business world, and therefore also in higher business education: ethics and emotional intelligence (EI). Though each phenomenon acquired this attention for entirely different reasons, there is an interesting interplay between these ethics and emotional intelligence. They seem to be interdependent, another term that has earned high acclaim in the twenty-first century. This chapter will first look into ethical behavior, inside and outside the corporate environment, and subsequently into emotional intelligence. Specific attention will be given to the applicability of these two topics in contemporary times. Finally, the chapter will discuss the interaction between these two themes.

Ethics: Definitions

Ethics is a very personal, hence very subjective, topic. What is considered unethical to one may be perfectly acceptable to another. Yet, the recent decade of major corporate scandals and unethical behavior, instigated by

leaders who were supposed to responsibly lead multi-million dollar entities, has made it apparent that there is a higher need to discuss ethics than most people initially thought, especially when preparing business students to become honorable members of the future workplace.

Up until the ethics scandals, ethics was not considered course material in higher education. It was something that employees would select to discuss in voluntary two-day seminars, and not a requirement for top management. Unfortunately, it turned out that the ones exempted from ethics workshops were the ones who needed them most.

In the past years of corporate deception, economic downturn, and global warming, members of the workforce have started to place the theme "ethics" in a broader picture than ever before. It has come to their understanding that unethical behavior can lead to national and international economic disasters, and can cause innocent people to lose all they worked for their entire lives. Increasingly, corporate social responsibility has become a term that was used as an extension of ethics. The role and influence of business has never been more apparent than today.

The link between corporate social responsibility and ethics lies in the last word of the first theme: *responsibility*. Although ethics can be interpreted in multiple ways, there are societal standards that cannot and should not be ignored.

Robin (2009) attempts a generally acceptable definition of business ethics by asserting: "stakeholders should be treated with fairness and respect in their naturally occurring exchanges with business."

Leadership Ethics

The shocking revelations of corporate greed and short-term profit-based behavior of the past decade have prompted an increasing need among today's corporate stakeholders to look for individuals in leadership positions that behave ethically, inside and outside the workplace. This is, in fact, no more than logical, because the actions and decisions of corporate leaders usually set the tone of behavior in their workforce. Sims (2009) stresses the importance of a leader's reputation within an organization's context and asserts that companies can send a strong message into the community when they get rid of unethical CEOs and hire leaders with a reputation of fairness, honesty, and responsibility. He mentions Boeing as an example, as the company let go two CEOs in two years: Phil Condit in 2003, because he was Boeing's main man at a time when the company's name got tainted in a scandal involving a $23 billion deal, and Harry Stonecipher in 2005, who got involved in an extra-marital affair at work.

Valente, Varca, Gotkin, and Barnett (2010) confirm that ethical or unethical behavior of top managers usually influences employees' ethical decisions, and the seriousness of an ethical issue usually influences

A Brief Report on
ONLINE FACULTY DEVELOPMENT PROGRAMME ON
"Artificial Intelligence, Machine Learning and Internet of Things" Towards Advanced Applications

Held during 6th December 2021 – 10th December 2021

Conducted by:Centre for Continuing Education, NIT WARANGAL & D.N.R.COLLEGE Of ENGINEERING & TECHNOLOGY,(Department of Electronics and Communication Engineering)

Resource person & Details:

Prof. N. V. Ramanarao	Dr. Bhukya Raju
Director NIT Warangal	NIT Warangal
Sai Kumar Dandla, DRDO	Manish, DRDO
Dr. Chandra Mohan D & Team	B Prasad & Team,K4U Infotech

Programme Description: Prof. N. V. Ramanarao started the programme with "Online Teaching Methodologies", "Introduction to Python– Indentation, Python Variables,Python Data Types." and "Lists, Tuples, Sets and Dictionaries, Python File Handling, Python String and Formatting". Dr. Bhukya Raju started the day2 programme with "Introduction to AI, machine learning tools and techniques, Supervised & unsupervised techniques Simple and multiple linear regressions", "Exploratory data analysis. – Histograms, Single and multi variant analysis, Deep learning techniques like single and multilayer perception". Sai Kumar Dandla started the day3 programme with "Artificial Neural Networks, Back Propagation, and Convolution Neural Networks in Various Research Domains", " RNN, Types and Applications". Manish, DRDO started the day4 programme with "IoT, IoT Boards, Use cases of IOT" and "Introduction to Raspberry Pi and Installation, Setup and Configuration pi". Dr. Chandra Mohan D & Team started the day5 programme with "Lighting an LED, Switching an LED on and off,Flashing an LED, Using buttons to get input, Manually controlling the LED", and B Prasad & Team started the afternoon programme with "Making a switch, Using a buzzer, Making traffic lights, Using a light-dependent resistor, Using a PIR sensor, Using an ultrasonic distance sensor ".

Faculty Response: 32 faculty members are attended & all the faculty are impressed with the new advancements in the Artificial Intelligence, Machine Learning and Internet of Things and forward to learn the new techniques and enthusiastic to teach the students about these new techniques.

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One Week FDP Program on

Artificial Intelligence Machine Learning and Internet of Things Applications

6th Dec21-10th Dec 2021

SI. NO	NAME OF THE FACULTY	DEPT	Date 06-12-2021 FN	Date 06-12-2021 AN	Date 07-12-2021 FN	Date 07-12-2021 AN	Date 08-12-2021 FN	Date 08-12-2021 AN	Date 09-12-2021 FN	Date 09-12-2021 AN	Date 10-12-2021 FN	Date 10-12-2021 AN
1	M. Thambi Babu	ME	M.Thambi	M.Thambi	M.Thambi	M.Thambi	M.Tambi	M.Tambi	M.Thambi	M.Thambi	M.Thambi	M.Thambi
2	DR.D. Bhanu Prasad	ME	Bhanu Prasad	Bhanu Prasad	Bhanu	Bhanu	Bhanu	Bhanu	Bhanu	Bhanu	Bhanu	Bhanu
3	G. Swai Babu	ECE	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu	G.Swaibabu
4	N. Mary leena	ECE	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena	N.M.leena
5	M. Laxmi kumar	ECE	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi	M.laxmi
6	B. Bholim	ME	B-Bhi	B-Bhi	B-Shi	B-Shi	B-Shi	B-Shi	B-solu	B-solu	B-ten	B-solu
7	P. Nagaraju	EEE	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu	P.Nagu
8	S. Chandra Prasad	ME	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr	S.C.Pr
9	M. Venkatakrishna	CE	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K	M.V.K
10	K.Y. Subrahmanyam	CE	K.V.S.M	K.V.S.M	K.V.Sy	K.V.Sy	K.V.Sy	K.V.Sy	K.V.Sy	K.V.Sy	K.V.Sy	K.V.Sy
11	M. Srinu	EEE										
12	MR.D.D.D swathi	CSE										
13	DY.NR.Sangaraju	CE										

No.	Name	Dept										
14	DR. P. Adabala											
15	DR. P.V.V.S. Narayana											
16	Ch. Renukha Devi	CSE										
17	V. PRAVEEN	BSH										
18	A. Vamsi Krishna	CSE										
19	P. Manoshimha Raju	ME										
20	DR. V. V. Raju	CSE										
21	V.R.E.S.S. Kumar	BSH										
22	P. Jayalaxmi	CSE										
23	G. Madhu	BSH										
24	K.V. Sinish	CSE										
25	U. Suswitha	CSE										
26	A. Vamsi Krishna	BSH										
27	K. Siva Syamala	CSE										
28	BH. Renukha	BSH										
29	BR. E. S. Kumar	M.BA										
30	N. Bhyagathi	CSE										
31	DR. G.V.J. Rao	M.BA										
32	V. PRAVEEN	BSH										

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Assistant Professor

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Education:

PhD [Computer Science and Engineering], 2021
National Institute of Technology, Warangal
Thesis Title: Machine Learning based Techniques to investigate and Interpret Latent genome sequence patterns for Diverse Signals and Disease Prediction

Master of Engineering (M.E): Jadavpur University, Kolkata

Thesis Title: Blog Mining and Emotion Argumentation

Work Experience:

- Assistant Professor (April 2022 – till date) - IIIT Sri City, Andhra Pradesh, India
- Assistant Professor (March 2021 – April 2022) – VIT-AP University, Amaravati, AP, India
- Assistant Professor (August 2013 – July 2017) – GITAM University, Hyderabad, India
- Assistant System Engineer (July 2012 – July 2013) – Tata Consultancy Services Ltd., Pune, India

Bioinformatics, Machine and Deep Learning, Natural Language Processing

- Qualified GATE (Computer Science and Information Technology) in 2010, 2014 and 2017.
- Qualified UGC-NET for Assistant Professor in Computer Science and Applications in 2013, 2014 and 2018.
- Qualified TS&AP-SET for Assistant Professor in Computer Science and Applications in 2014.

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- Received GATE fellowship for M.E, from Ministry of Human Resource Development, India from August 2010 to June 2012.
- Institute Fellowship (During PhD) from MHRD, Govt. of India from July 2017 to December 2021.
- Received Prathibha Award from Government of Andhra Pradesh in 2002.

IoT-Induced Artificial Intelligence for Emerging Computing Paradigms

An intensive One-week faculty development program is being organized for faculty, and research scholars of engineering and technological institutions. It is also open to personshailing from the industry. The objective of this workshop cum FDP is to present a clear understanding of today's technologies based on the Next Generation Smart Computing Paradigm. Dynamic interactive sessions with prominent experts will be conducted in different domains of research such as Cloud Computing and its Services, Fog/Edge Computing and its Applications, Internet-of-Things, Big Data & Analytics, Artificial Intelligence, and many more. The technical program will include state-of-the-art seminars, discussion/presentation sessions, signifying the Research challenges, insights, and practical learning through Hands-on sessions on the aforementioned research areas.

Internet of Things (IoT) enables the interconnection between billions of devices, industrial machines,processes, and users to exchange data without any central coordination.

However, handling large amounts of data is immensely complex in the storage, processing, and inferencing processes. Therefore, artificial intelligence (AI) has become the most promising combination with IoT for better use, storage and avoid the uncertainty management in decision making. AI in IoT is playing a significant role and can improve the value of diverse types of data sensed and collected byIoT devices. For proper utilization of this diverse type of data will offer an efficient solution for the development of products and services to achieve the user's expectation from different sectors. Despite the various advantages of the integration of AI with different intelligent systems for various industrial applications, the appropriate application of AI poses several challenges with respect to data quality, data volume, integration, and accuracy of the inferences drawn from the collected data. In recent decades, machine learning (ML) based methods and technologies have emerged in AI and the convergence of ML and IoT will complement each other to produce a greater impact and availability of different services including healthcare, supply chain, transportation, and power sectors.

The primary purpose of this Special Issue is to attract, collate, and previously unpublished original research and review papers on the use of AI-based technologies for the development, provisioning, and performance improvement of systems, functions, and processes in diverse industrial scenarios.

Potential topics include but are not limited to the following:

- Security issues in the IoT devices
- AI-based scalable hybrid systems for IoT
- AI-based learning methods and algorithms for IoT
- Real/Industrial application-based AI systems for IoT
- Prescriptive, predictive, and descriptive analytics for IoT device issues
- Machine learning algorithms for addressing IoT device problems
- Embedded solutions in the cloud for IoT device problems
- IoT technologies with AI for smart cities, precision agriculture, industry 4.0 solutions, self-driving vehicles and health tracking, etc
- Novel machine learning and data science methods for IoT security
- Use of ML techniques for security, trust, and privacy in IoT systems
- Machine learning for emerging network management, service, and automation
- Blockchain technology supports supply chain operation
- Cloud based big data

In today's technological scenario, artificial intelligence (AI) has predominantly taken over the charge of decision making in various sectors of business and advanced knowledge oriented platforms. AI has been around for long time yet remains a challenge. This excellent technology has been performing extraordinary improvement in our sphere of technical modernization. What's more, with innovation and its proper management, there is greater development in scientific and engineering fields where impression of this improvement is noticeable.

Along with AI, the emerging techniques of machine learning (ML) and their approaches are also getting attention due to their effective use. Truly AI is not new, notwithstanding, it has come to viability that guarantees it to call genuine AI.Recent advances in the innovation of AI and ML have tremendous contribution

in Internet of Things (IoT) and Cloud computing-based new secured systems. The current research piece illustrates a detail analytical review on various challenges faced by ML and AI when applied in IoT and Cloud computing platforms.

Machine Learning Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it to learn for themselves. The process of learning begins with observations or data, such as examples, direct experience, or instruction, in order to look for patterns in data and make better decisions in the future based on the examples that we provide. The primary aim is to allow the computers to learn automatically without human intervention or assistance and adjust their actions accordingly. 1.1.1 Some machine learning methods

1. Supervised machine learning algorithms can apply what has been learned in the past to new data using labeled examples to predict future events. Starting from the analysis of a known training dataset, the learning algorithm produces an inferred function to make predictions about the output values. The system is able to provide targets for any new input after sufficient training. The learning algorithm can also compare its output with the correct, intended output and find errors in order to modify the model accordingly.
2. 3 Figure 1.1: Supervised Learning
3. 2. Unsupervised machine learning algorithms are used when the information used to train is neither classified nor labeled. Unsupervised learning studies how systems can infer a function to describe a hidden structure from unlabeled data. The system doesn't figure out the right output, but it explores the data and can draw inferences from datasets to describe hidden structures from unlabeled data. Figure 1.2: Unsupervised Learning

   4. Semi-supervised machine learning algorithms fall somewhere in between supervised and unsupervised learning, since they use both labeled and unlabeled data for training – typically a small amount of 4 labeled data and a large amount of unlabeled data. The systems that use this method are able to considerably improve learning accuracy. Usually, semi- supervised learning is chosen when the acquired labeled data requires skilled and relevant resources in order to train it / learn from it. Otherwise, acquiring unlabeled data generally doesn't require additional resources. Figure 1.3: Semi-supervised machine learning
5. 4. Reinforcement machine learning algorithms is a learning method that interacts with its environment by producing actions and discovers errors or rewards. Trial and error search and delayed reward are the most relevant characteristics of reinforcement learning. Figure 1.4: Reinforcement machine learnin 5 This method allows machines and software agents to automatically determine the ideal behavior within a specific context in order to maximize its performance. Simple reward feedback is required for the agent to learn which action is best; this is known as the reinforcement signal. Machine learning enables analysis of massive quantities of data. While it generally delivers faster, more accurate results in order to identify profitable opportunities or dangerous risks, it may also require additional time and resources to train it properly. Combining machine learning with
6. AI and cognitive technologies can make it even more effective in processing large volumes of information. 1.1.2 Application of machine learning in day to day life 1. Virtual Personal Assistants Siri, Alexa, Google Now are some of the popular

examples of virtual personal assistants. As the name suggests, they assist in finding information, when asked over voice. All you need to do is activate them and ask, "What is my schedule for today?",

7. "What are the flights from Germany to London", or similar questions. For answering, your personal assistant looks out for the information, recalls your related queries, or send a command to other resources (like phone apps) to collect info. You can even instruct assistants for certain tasks like "Set an alarm for 6 AM next morning", "Remind me to visit the visa office the day after tomorrow". Machine learning is an important part of these personal assistants as they collect and refine

8. the information on the basis of your previous involvement with them. Later, this set of data is utilized to render results that are tailored to your preferences. Virtual Assistants are integrated to a variety of platforms. For example, devices like Amazon Echo and Google Home, and smart phones software's like Samsung Bixby on Samsung S8 2. Predictions while Commuting Traffic Predictions: We all have been using GPS navigation services. While we do that, our current locations and velocities are being saved at a central server for managing traffic. This data is then used to build a map of current traffic. While this helps in preventing the traffic and congestion analysis, the underlying problem is that there are less number of cars that are equipped with GPS. Machine learning in such

9. 6 scenarios helps to estimate the regions where congestion can be found on the basis of daily experiences. Online Transportation Networks: When booking a cab, the app estimates the price of the ride. When sharing these services, how do they minimize the detours? The answer is machine learning. Jeff Schneider, the engineering lead at Uber ATC reveals in an interview that they use ML to define price surge hours by predicting the rider demand. In the entire cycle of the services, ML is playing a major role.

10. Video Surveillance Imagine a single person monitoring multiple video cameras! Certainly, a difficult job to do and boring as well. This is why the idea of training computers to do this job makes sense. The video surveillance systems nowadays are powered by AI that makes it possible to detect crime before they happen. They track unusual behaviour of people like standing motionless for a long time, stumbling, or napping on benches etc. The system can thus give an alert to human attendants, which can ultimately help to avoid mishaps. And when such activities are reported and counted to be true, they help to improve the surveillance services. This happens with machine learning doing its job at the backend. 4. Social Media Services From personalizing your news feed to better ads targeting, social media platforms are utilizing machine learning for their own and user benefits. Here are a few examples that you must be noticing, using, and loving in your social media accounts, without realizing that these wonderful features are nothing but the applications of ML. People You May Know: Machine learning works on a simple concept: understanding with experiences.

11. Facebook continuously notices the friends that you connect with, the profiles that you visit very often, your interests, workplace, or a group that you share with someone etc. On the basis of continuous learning, a list of Facebook users are suggested that you can become friends with. Face Recognition: You upload a picture of you with a friend and Facebook instantly recognizes that friend. Facebook checks the poses and projections in the picture, notice the unique features, and then match them with the people in your friend list. The entire process at the backend is complicated and takes care of the precision factor but seems to be a simple application of ML at the front

end. 7 Similar Pins: Machine learning is the core element of Computer Vision, which is a technique to extract useful information from images and videos. Pinterest uses computer vision to identify the objects (or pins) in the images and recommend similar pins accordingly.

12. 5. Email Spam and Malware Filtering There are a number of spam filtering approaches that email clients use. To ascertain that these spam filters are continuously updated, they are powered by machine learning. When rule-based spam filtering is done, it fails to track the latest tricks adopted by spammers. Multi Layer Perceptron, C 4.5 Decision Tree Induction are some of the spam filtering techniques that are powered by ML. Over 325, 000 malwares are detected everyday and each piece of code is 90–98% similar to its previous versions. The system security programs that are powered by machine learning understand the coding pattern. Therefore, they detect new malware with 2–10% variation easily and offer protection against them. 6. Online Customer Support A number of websites nowadays offer the option to chat with customer support representatives while they are navigating within the site. However, not every website has a live executive to answer your queries. In most of the cases, you talk to a chatbot.

13. These bots tend to extract information from the website and present it to the customers. Meanwhile, the chatbots advance with time. They tend to understand the user queries better and serve them with better answers, which is possible due to its machine learning algorithms. 7. Search Engine Result Refining Google and other search engines use machine learning to improve the search results for you. Every time you execute a search, the algorithms at the backend keep a watch at how you respond to the results. If you open the top results and stay on the web page for long, the search engine assumes that the results it displayed were in accordance to the query. Similarly, if you reach the second or third page of the search results but do not open any of the results, the search engine estimates that the results served did not match the requirement. This way, the algorithms working at the backend improve the search results.

14. Product Recommendations 8 You shopped for a product online a few days back and then you keep receiving emails for shopping suggestions. If not this, then you might have noticed that the shopping website or the app recommends you some items that somehow match with your taste. Certainly, this refines the shopping experience but did you know that it's machine learning doing the magic for you? On the basis of your behaviour with the website/app, past purchases, items liked or added to cart, brand preferences etc., the product recommendations are made.

15. Online Fraud Detection Machine learning is proving its potential to make cyberspace a secure place and tracking monetary frauds online is one of its examples. For example: Paypal is using ML for protection against money laundering. The company uses a set of tools that helps them to compare millions of transactions taking place and distinguish between legitimate or illegitimate transactions taking place between the buyers and sellers.

REPORT ABOUT THE PROGRAMME

Dt: 22-09-2021

Title of the Programme: A One Day Workshop on "PATENT RIGHTS"

Inauguration Date & Venue: 21st Sep 2021 & DNRCET Seminar Hall

Organized By: Department of Electronics & Communication Engineering, DNRCET

Resource Person: Dr. D. J Nagendra Kumar, Asst. Prof in Dept of Information Technology, VIT AP , Amaravathi.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

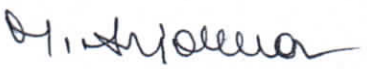Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 31

Concept:

A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application. There are four different patent types:

- Utility patent. This is what most people think of when they think about a patent.
- Provisional patent.
- Design patent.
- Plant patent.

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Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 21-09-2021	
			FN	AN
1	M. Lakshmi kumar	ECE	M.Lak	M.lak
2	M. Pandu Ranga Rao	ME	M.R.R	M.R.R
3	B. suresh kumar	ME	B.S	B.S
4	Dr. Md Athasaw	ME	Ahar	Ahar
5	J. Keerthana	ECE	J.B	J.R
6	Y. Srinivas	ECE	Y.Srini	Y.Srin
7	G. vamsi krishna	mE	VK	VK
8	G. SuriBabu	ECE	SuriBab	SuriBal
9	p. Annapurna JD	ECE	P.A J.D	P.A.JD
10	G. koteswararao	ECE	G.kot	G.kot
11	I. Geetha	ECE	I.GT	I.G
12	K. Surya Satish kumar	ECE	K. Satish	K. Satish
13	D. Joseph kumar	ECE	D	D
14	K.V subrahamanyam	ECE	K.V.S	K.S
15	N. Manyleema	ECE	N.Mh	N.Mh
16	E. Ramalakshmi	CSE	R	R
17	Dr. KBVSR Subrahmanyam	EEE	Subrah	Subrah
18	M. venkata krishna	CE	MVK	MVK

One day Workshop on Patent Rights 21st Sep 2021

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19	B. Shalem	MG	
20	T. Prasanth	CE	
21	M. Srinu	ECE	
22	Dr. I. Harish	ME	
23	M. Jhambi babu	ME	
24	DR. B. Bhanuprakash	ME	
25	S. chandu Prasad	ME	
26	DR. NR sanga Raju	CE	
27	G. Sai baba	ECE	
28	P. Naga Raju	EEE	
29	M. V. Daniel	ME	
30	Dr. M. Anjan kumar	CE	
31	Dr. R. Ramya swetha	CE	

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PROFILE

Dr.D.J.NAGENDRA KUMAR

Professor & Head

CURRENT POSITION:

Dean, Statutory Affairs

Professor&Head,

Department of Information Technology

EDUCATION:

Ph.D.   from   JNTUH,

M.Tech from ANDHRA UNIVERSITY

MCA   from ANDHRA UNIVERSITY

RESEARCH INTEREST:

- Data Mining

- Machine Learning, Genetic Programming

Present Working in Vishnu engineering college bhimavaram

Bhimavaram

What Is a Patent?

A patent safeguards an original invention for a certain period of time and is granted by the United States Patent and Trademark Office (USPTO). By granting the right to produce a product without fear of competition for the duration of the patent, an incentive is provided for companies or individuals to continue developing innovative new products or services.

There are three types of patents: utility patents, plant patents, and designpatents.

Utility Patent

A utility patent covers the creation of a new or improved product, process, or machine. Also known as a "patent for invention," it bars other individuals or companies from making, using, or selling the creation without consent. Utility patents are good for up to 20 years after the patent application is filed, but require the holder to pay regularly scheduled maintenance fees.

While most people associate patents with machines and appliances, they can also apply to software, business processes, and chemical formulations such as in pharmaceutical products.

Plant Patent

A plant patent protects a new and unique plant's key characteristics from being copied, sold, or used by others. It is also good for 20 years after the application is filed. The plant must be asexually reproducible with reproduction being genetically identical to the original and performed through methods such as root cuttings, bulbs, division, or grafting and budding.

Design Patent

A design patent, on the other hand, applies to the unique look of a manufactured item. Take, for example, an automobile with a distinctive hood or headlight shape. These visual elements are part of the car's identity and may add to its value; however, without protecting these components with a patent, competitors could potentially copy them without legal consequences.

Design patents issued since May 2015 last for 15 years from the date the patentis granted and do not require maintenance fees. Patents issued prior to that lastfor 14 years.

What Is a Trademark?

Unlike patents, a trademark protects words and design elements that identify the source of a product. Brand names and corporate logos are primary examples. A service mark is similar, except that it safeguards the provider of a service instead of a tangible good. The term "trademark" is often used in reference to both designations.

Some examples of trademark infringement are fairly straightforward. You'll probably run into trouble if you try to bottle a beverage and call it Coca-Cola or even use the famous wave from its logo since both have been protected for decades.

However, a trademark actually goes a bit further, prohibiting any marks that have a "likelihood of confusion" with an existing one. Therefore, a business can't use a symbol or brand name if it looks similar, sounds similar, or has a similar meaning to one that's already on the books, at least if the products or services are related.If the trademark holder believes there's a violation of these rights, it may decide to sue.67

What Is a Copyright?

Copyrights protect "original works of authorship," such as writings, art, architecture, and music. For as long as the copyright is in effect, the copyright owner has the sole right to display, share, perform, or license the material.8

One notable exception is the "fair use" doctrine, which allows some degree of distribution of copyrighted material for scholarly, educational, or news-reporting purposes.9

Technically, you don't have to file for a copyright to have the piece of work protected. It's considered yours once your ideas are translated into a tangible form, such as a book, music, or published research; however, officially registering with the U.S. Copyright Office before—or within five years of—publishing your work makes it a lot easier to establish that you were the original author if you ever have to go to court.

The duration of a copyright depends on the year it was created, as the laws have changed over the years. Since 1978, most compositions have been copyright- protected for 70 years after the author's death. After that time, individual works enter the public domain and can be reproduced by anyone without permission.

As a general rule, the author retains ownership of copyright privileges, even if the material is published by another company. There is an important exception to this rule, though.

Materials you create for your employer as part of your job requirements, for example, contributions to a podcast the company publishes, are usually considered "works for hire." The employer, not you, retains the copyright. If there's a gray area, you can try to negotiate with the publisher over copyright ownership prior to creating the piece; just be sure to get it in writing.11

What Is the Difference Between a Patent, Copyright, and Trademark?

A patent protects new inventions, processes, or scientific creations, a trademark protects brands, logos, and slogans, and a copyright protects original works of authorship.

What Are the 3 Types of Patents?

The three types of patents are design, utility, and plant. Utility patents are for new discoveries, compositions of matter, machines, or processes. Plant patents are for anyone that discovers or develops and asexually reproduces a new variety of plant. A design patent is for anyone that creates a new, original, and ornamental design.2

What Is Included in a Trademark?

A trademark includes words, phrases, designs, or any combination of these that particularly identify a good or service.7

The Bottom Line

The decision to pursue a patent, trademark, or copyright depends on the type of intellectual property you're trying to shield. Whether it's a new product, logo, or creative work, registering your idea with the appropriate body can help ensure you enjoy the fruits of your labor.

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REPORT ABOUT THE PROGRAMME

Dt: 11-04-2022

Title of the Programme: A Two Day FDP Program on Artificial Intelligence Machine Learning and Internet of Things Applications

Inauguration Date & Venue: 9th Apr 2022 & DNRCET Seminar Hall

Organized By: Department of Mechanical Engineering, DNRCET

Resource Person: Dr. Chandra Mohan D & Team, B. Prasad & Team, K4U Infotech.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

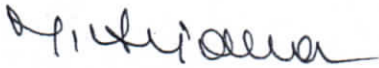**Inauguration:** Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 38

Concept:

Internet of Things (IoT) enables the interconnection between billions of devices, industrial machines, processes, and users to exchange data without any central coordination. Machine learning for IoT can be used to project future trends, detect anomalies, and augment intelligence by ingesting image, video and audio. Machine learning can help demystify the hidden patterns in IoT data by analyzing massive volumes of data using sophisticated algorithms.

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A Two Day FDP Program on Artificial Intelligence Machine Learning and Internet of Things Applications 9th&10th Apr2022

Sl. NO	NAME OF THE FACULTY	DEPT	Date 9-04-2022		Date 10-04-2022	
			FN	AN	FN	AN
1	Dr. R.Ramya Swetha	CE	P	P	P	P
2	T. PRASANTH	CE	P	P	P	P
3	M. Sainu	EEE	S	S	S	S
4	P. Nagaraju	EEE	A	A	A	A
5	Dr. J. Harish	ME	P	P	P	P
6	M. Pandi Rangarao	ME	Pandi	Pandi	Pandi	Pandi
7	M. LAKSHMI KUMAR	CE	lakshu	lakshu	lakshu	lakshu
8	K. Posimani	ECE	KRN	KRN	KRN	KRN
9	I. Geetha	ECE	Geetha	Geetha	Geetha	Geetha
10	K. Venkanna naidu	ECE	KVN	KVN	KVN	KVN
11	B. SHALEM	ME	S	S	S	S
12	M. Thambi Babu	MC	T	T	T	T
13	M. Vijay Daniel	ME	V	V	V	V
14	G.V. Jateja Siju	CSE	Guru	Guru	Guru	Guru
15	Dr. A.P. Barun	ECE	APP	APP	APP	APP
16	K. venkata chandra	CSE	KVC	KVC	KVC	KVC
17	V. Bhavani Durga	ECE	VBA	VBA	VBA	VBA
18	N.V.S.L. Sowjanya	ECE	S	S	S	S
19	E. VOHO SHOVA	CSE	S	S	S	S
20	V. R.E.S.S.Kumar	MBA	k	k	k	k
21	Dr. G.V. Jagapathi Rao	MBA	J	J	J	J
22	P. Narasimha Rao	BSH	Me	Me	Me	Me
23	V. Praveen.	BSH	P	P	P	P
24	G.V. Satya Ram	CSE	S	S	S	S
25	B. Nandana Kumar	CSE	Au	Au	Au	Au
26	Mrs. M. Nagalakshmi	CSE	Au	Au	Au	Au
27	A.S. Ram Prasai	CSE	R	R	R	R
28	S. Koteswari	ECE	to	to	to	to
29	D.D.D sunri BABU	CSE	SB	SB	SB	SB
30	N.S. V.L. Sowjanya	ECE	S	S	S	S
31	I. Geetha	ICE	to	to	to	to
32	M. Thambi BaBu	ME	to	to		
33	G. Koteswara Rao	ECE	to	ku	ku	ku
34	N. Mary Vavela	ECE	to		to	to
35	k.v.s Sirisha .	BSH	Me			
36	MOSH. Geeta	BSH	Me		to	to
37	N. Bharathi	CSE				App

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| 38 | E. YDHOSHUA | CSE | | | | |

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Dr. Chandra Mohan D
Assistant Professor

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Faculty Block 311, Indian Institute of Information Technology,
Sri City, Chittoor, 630, Gnan Marg, Sri City, Satyavedu (Mandal)
Chittoor District - 517 646, Andhra Pradesh, India

chandramohan.d@iiits.in / chandu.nitw44@gmail.com

Education:

PhD [Computer Science and Engineering], 2021
National Institute of Technology, Warangal
Thesis Title: Machine Learning based Techniques to investigate and Interpret Latent genome sequence patterns for Diverse Signals and Disease Prediction

Master of Engineering (M.E): Jadavpur University, Kolkata

Thesis Title: Blog Mining and Emotion Argumentation

Work Experience:

- Assistant Professor (April 2022 – till date) - IIIT Sri City, Andhra Pradesh, India
- Assistant Professor (March 2021 – April 2022) – VIT-AP University, Amaravati, AP, India
- Assistant Professor (August 2013 – July 2017) – GITAM University, Hyderabad, India
- Assistant System Engineer (July 2012 – July 2013) – Tata Consultancy Services Ltd., Pune, India

Bioinformatics, Machine and Deep Learning, Natural Language Processing

- Qualified GATE (Computer Science and Information Technology) in 2010, 2014 and 2017.
- Qualified UGC-NET for Assistant Professor in Computer Science and Applications in 2013, 2014 and 2018.
- Qualified TS&AP-SET for Assistant Professor in Computer Science and Applications in 2014.

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- Received GATE fellowship for M.E, from Ministry of Human Resource Development, India from August 2010 to June 2012.
- Institute Fellowship (During PhD) from MHRD, Govt. of India from July 2017 to December 2021.
- Received Prathibha Award from Government of Andhra Pradesh in 2002.

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In today's technological scenario, artificial intelligence (AI) has predominantly taken over the charge of decision making in various sectors of business and advanced knowledge oriented platforms. AI has been around for long time yet remains a challenge. This excellent technology has been performing extraordinary improvement in our sphere of technical modernization. What's more, with innovation and its proper management, there is greater development in scientific and engineering fields where impression of this improvement is noticeable.

Along with AI, the emerging techniques of machine learning (ML) and their approaches are also getting attention due to their effective use. Truly AI is not new, notwithstanding, it has come to viability that guarantees it to call genuine AI.Recent advances in the innovation of AI and ML have tremendous contribution

in Internet of Things (IoT) and Cloud computing-based new secured systems. The current research piece illustrates a detail analytical review on various challenges faced by ML and AI when applied in IoT and Cloud computing platforms.

Machine Learning Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it to learn for themselves. The process of learning begins with observations or data, such as examples, direct experience, or instruction, in order to look for patterns in data and make better decisions in the future based on the examples that we provide. The primary aim is to allow the computers to learn automatically without human intervention or assistance and adjust their actions accordingly. 1.1.1 Some machine learning methods

1. Supervised machine learning algorithms can apply what has been learned in the past to new data using labeled examples to predict future events. Starting from the analysis of a known training dataset, the learning algorithm produces an inferred function to make predictions about the output values. The system is able to provide targets for any new input after sufficient training. The learning algorithm can also compare its output with the correct, intended output and find errors in order to modify the model accordingly.

2. 3 Figure 1.1: Supervised Learning

3.   2. Unsupervised machine learning algorithms are used when the information used to train is neither classified nor labeled. Unsupervised learning studies how systems can infer a function to describe a hidden structure from unlabeled data. The system doesn't figure out the right output, but it explores the data and can draw inferences from datasets to describe hidden structures from unlabeled data. Figure 1.2: Unsupervised Learning

4.   Semi-supervised machine learning algorithms fall somewhere in between supervised and unsupervised learning, since they use both labeled and unlabeled data for training – typically a small amount of 4 labeled data and a large amount of unlabeled data. The systems that use this method are able to considerably improve learning accuracy. Usually, semi- supervised learning is chosen when the acquired labeled data requires skilled and relevant resources in order to train it / learn from it. Otherwise, acquiring unlabeled data generally doesn't require additional resources. Figure 1.3: Semi-supervised machine learning

5. 4. Reinforcement machine learning algorithms is a learning method that interacts with its environment by producing actions and discovers errors or rewards. Trial and error search and delayed reward are the most relevant characteristics of reinforcement learning. Figure 1.4: Reinforcement machine learnin 5 This method allows machines and software agents to automatically determine the ideal behavior within a specific context in order to maximize its performance. Simple reward feedback is required for the agent to learn which action is best; this is known as the reinforcement signal. Machine learning enables analysis of massive quantities of data. While it generally delivers faster, more accurate results in order to identify profitable opportunities or dangerous risks, it may also require additional time and resources to train it properly. Combining machine learning with

6. AI and cognitive technologies can make it even more effective in processing large volumes of information. 1.1.2 Application of machine learning in day to day life 1. Virtual Personal Assistants Siri, Alexa, Google Now are some of the popular

examples of virtual personal assistants. As the name suggests, they assist in finding information, when asked over voice. All you need to do is activate them and ask, "What is my schedule for today?",

7.   "What are the flights from Germany to London", or similar questions. For answering, your personal assistant looks out for the information, recalls your related queries, or send a command to other resources (like phone apps) to collect info. You can even instruct assistants for certain tasks like "Set an alarm for 6 AM next morning", "Remind me to visit the visa office the day after tomorrow". Machine learning is an important part of these personal assistants as they collect and refine

8. the information on the basis of your previous involvement with them. Later, this set of data is utilized to render results that are tailored to your preferences. Virtual Assistants are integrated to a variety of platforms. For example, devices like Amazon Echo and Google Home, and smart phones software's like Samsung Bixby on Samsung S8 2. Predictions while Commuting Traffic Predictions: We all have been using GPS navigation services. While we do that, our current locations and velocities are being saved at a central server for managing traffic. This data is then used to build a map of current traffic. While this helps in preventing the traffic and congestion analysis, the underlying problem is that there are less number of cars that are equipped with GPS. Machine learning in such

9.   6 scenarios helps to estimate the regions where congestion can be found on the basis of daily experiences. Online Transportation Networks: When booking a cab, the app estimates the price of the ride. When sharing these services, how do they minimize the detours? The answer is machine learning. Jeff Schneider, the engineering lead at Uber ATC reveals in an interview that they use ML to define price surge hours by predicting the rider demand. In the entire cycle of the services, ML is playing a major role.

10.   Video Surveillance Imagine a single person monitoring multiple video cameras! Certainly, a difficult job to do and boring as well. This is why the idea of training computers to do this job makes sense. The video surveillance systems nowadays are powered by AI that makes it possible to detect crime before they happen. They track unusual behaviour of people like standing motionless for a long time, stumbling, or napping on benches etc. The system can thus give an alert to human attendants, which can ultimately help to avoid mishaps. And when such activities are reported and counted to be true, they help to improve the surveillance services. This happens with machine learning doing its job at the backend. 4. Social Media Services From personalizing your news feed to better ads targeting, social media platforms are utilizing machine learning for their own and user benefits. Here are a few examples that you must be noticing, using, and loving in your social media accounts, without realizing that these wonderful features are nothing but the applications of ML. People You May Know: Machine learning works on a simple concept: understanding with experiences.

11. Facebook continuously notices the friends that you connect with, the profiles that you visit very often, your interests, workplace, or a group that you share with someone etc. On the basis of continuous learning, a list of Facebook users are suggested that you can become friends with. Face Recognition: You upload a picture of you with a friend and Facebook instantly recognizes that friend. Facebook checks the poses and projections in the picture, notice the unique features, and then match them with the people in your friend list. The entire process at the backend is complicated and takes care of the precision factor but seems to be a simple application of ML at the front

end. 7 Similar Pins: Machine learning is the core element of Computer Vision, which is a technique to extract useful information from images and videos. Pinterest uses computer vision to identify the objects (or pins) in the images and recommend similar pins accordingly.

12. 5. Email Spam and Malware Filtering There are a number of spam filtering approaches that email clients use. To ascertain that these spam filters are continuously updated, they are powered by machine learning. When rule-based spam filtering is done, it fails to track the latest tricks adopted by spammers. Multi Layer Perceptron, C 4.5 Decision Tree Induction are some of the spam filtering techniques that are powered by ML. Over 325, 000 malwares are detected everyday and each piece of code is 90–98% similar to its previous versions. The system security programs that are powered by machine learning understand the coding pattern. Therefore, they detect new malware with 2–10% variation easily and offer protection against them. 6. Online Customer Support A number of websites nowadays offer the option to chat with customer support representatives while they are navigating within the site. However, not every website has a live executive to answer your queries. In most of the cases, you talk to a chatbot.

13. These bots tend to extract information from the website and present it to the customers. Meanwhile, the chatbots advance with time. They tend to understand the user queries better and serve them with better answers, which is possible due to its machine learning algorithms. 7. Search Engine Result Refining Google and other search engines use machine learning to improve the search results for you. Every time you execute a search, the algorithms at the backend keep a watch at how you respond to the results. If you open the top results and stay on the web page for long, the search engine assumes that the results it displayed were in accordance to the query. Similarly, if you reach the second or third page of the search results but do not open any of the results, the search engine estimates that the results served did not match the requirement. This way, the algorithms working at the backend improve the search results.

14. Product Recommendations 8 You shopped for a product online a few days back and then you keep receiving emails for shopping suggestions. If not this, then you might have noticed that the shopping website or the app recommends you some items that somehow match with your taste. Certainly, this refines the shopping experience but did you know that it's machine learning doing the magic for you? On the basis of your behaviour with the website/app, past purchases, items liked or added to cart, brand preferences etc., the product recommendations are made.

15. Online Fraud Detection Machine learning is proving its potential to make cyberspace a secure place and tracking monetary frauds online is one of its examples. For example: Paypal is using ML for protection against money laundering. The company uses a set of tools that helps them to compare millions of transactions taking place and distinguish between legitimate or illegitimate transactions taking place between the buyers and sellers.

REPORT ABOUT THE PROGRAMME

Dt: 09-05-2022

Title of the Programme: One Day Workshop on Multi Criteria Decision Making

Inauguration Date & Venue: 8th May 2022 & DNRCET Seminar Hall

Organized By: Department of Basic Sciences & Humanities, DNRCET

Resource Person: Dr. Lakshmi D, Senior Associate Professor, School of Computer Science Engineering, VIT, Bhopal University, Madhya Pradesh.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association
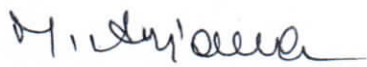
Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 39

Concept:

Multiple-criteria decision-making (MCDM) or multiple-criteria decision analysis (MCDA) is a sub-discipline of operations research that explicitly evaluates multiple conflicting criteria in decision making (both in daily life and in settings such as business, government and medicine). MCDM is a generic term for all methods that exist for helping people makes decisions according to their preferences, in cases where there is more than one conflicting criterion. Integrated analytic hierarchy process and its applications–a literature review.

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D.N.R.COLLEGE OF ENGINEERING & TECHNOLOGY

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(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)

(Accredited with B++ Grade by NAAC)

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https://dnrcet.org

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 8/05/22	
			FN	AN
1	J. Keerthana	CE	J Keerthana	J. Keerthana
2	P. Anjaneyulu JP	CE	P. Anjaneyulu	P. Anjaneyulu
3	T. Prashanth	CE	T. Prasanth	T Prasanth
4	Manne Srinu	EEE	M. Srinu	M. Srinu
5	Joseph kumar	EEE	J kumar	J kumar
6	P. Naguraju	EEE	P. Nagu Yaju	P. Naguraju
7	N Venkata krishna	CE Engs	N. V.krishna	N. V.krishna
8	G. Sai Baba	EEE	G. Sai baba	G. Saibab
9	Dr. Ippili Harish	M.E	I. Harish	T. Harish
10	M Bindu tuaga furo	ME	M. P. Lingtro	M. P. longutra
11	B. Suresh Kumar	ME	B. Sureshkuma	B. Suresh kma
12	G. Vamsikrishna	ME	G. Vams	G. Vamsha
13	M. vijay Daniel	ME	M. vijaydaniel	M. vijay Daniel
14	M. Thambi babu	ME	M. Thambibabu	M. Thambibab
15	Dr. Md. Ahasan	ME	Md. Ahasan	Md. Ahasan
16	B. shalem	ME	B. Shalem	B. shalem
17	K. S. Satish kumar	ECE	K. S S. kuma	K S S kuma
18	G. Suri Babu	ECE	G.Suri babu	G. Suri babu
19	G. Koteswarchu	ECE	G. Kotuswrh	G. Kotswmb
20	K. V. Naidu	ECE	K V. Naidu	K V. Naidu
21	N. Mery Loana	ECE	N. Mery Loam	N Mery Loam
22	J. Greelta	ECE	I. braalt	J. Greelth
23	K. Pushma	ECE	K. Pushma	K. Pushma
24	Dr. D. B. Prakash	M.E	D. B. prakash	D. B prakash
25	N.S.V.L. Sowjanya	ECE	N. Sow Janya	N. Sow Janya
26	Dr. S. Koteswari	ECE	S Kotiswour	S Kotiswm
27	B. Sridevi	ECE	B Sri Devi	B Sri Devi.

28	K. Sekhar Babu	ECE	K. Sekhar Babu	K. Sekhar Babu
29	V. Bhavani Durga	ECE	V. Bhavani	V. Bhavan
30	Dr. N. Venkat Rao	ECE	N. Venkat Rao	N. Venkat Rao
31	Dr A. P. Ramesh	ECE	A. P. Ramesh	A. P. Ramesh
32	B. Nandan Kumar	CSE	B. Nandan kur	B. Nandan kur
33	L. Bujji Babu	CSE	L. Bujji	L. Bujji
34	E. Rama Lakshmi	CSE	E. Rama Lld	E. Rama Lakshmi
35	K. V. Chandra	CSE	K. V. Chandra	K. V. Chandra
36	G. V. S. Sriram	CSE	G. V. S. Sriram	G. V. S. Sriram
37	M. N. Lakshmi	CSF	M. N. Labmi	M. N. Lakshmi
38	N. Bharathi	CSE	N. Bharathi	N. Bharathi
39	K. V. S. Sirisha	CSF	K. V. S. Sirisha	K. V. S. Sirisha

PRINCIPAL

2

Personal Profile

Institution's Address   :   Dr Lakshmi D
Senior Associate Professor
School of Computing Science
and Engineering
VIT Bhopal University
Madhya Pradesh, India

Residential Address   :   Dr. D. Lakshmi

Mobile contact   :   9945379089

E-mail   :   lakshmi.lifefordivine@gmail.com

Website(s)

https://educationforempowerment.blogspot.com

www.atchayapaathiram.com

YouTube Channel

https://www.youtube.com/c/DrLakshmiD/videos

Educational Profile

Degree / Diploma	University	Name of the Institution	Class/ Marks obtained	Month & Year Passing
Ph.D	Anna University, Chennai	Part-Time		May 2017
				Title: Investigations On Behavioral Analysis For Improving Learning Practice

				uder the supervision of Dr Raj. Sukumaran
M.Tech Computer Cognition Technology	University of Mysore, Mysore.	Department of Studies in Computer Science, University of Mysore, Mysore.	First Class with Distinction 4.83/5	2003 – 2005
B.E Computer Science and Engineering	University of Madras, Chennai	VRS College of Engineering and Technology,	69.70%	1994-1998
Higher Secondary Certificate	Board of Hr. Sec. Examination- Tamilnadu	Nirmala Girls Hr. Sec. School, Ariyalur. Tamil Nadu	85.00%	1992-1994
Secondary School Leaving Certificate	Board of Secondary Education- Tamilnadu	Sevamandir Girl's Higher Secondary School, Parangipettai.Tamil Nadu.	85.00%	Mar-92

Teaching Experience

Sl. No	Designation	Institution	Period of Employment			
			From	To	Years	Months
1	Senior Associate Professor	VIT Bhopal University	03-March-2021	Till date		9
2	Associate Professor	B V Raju Institute of Technology	15-June-2016	Till Date	5	8
3	Educational Research Officer	Vishnu Educational and Development Center, Hyderabad	15-June-2016	Till Date	5	8
4	Asso. Prof	AIMS Institute of Higher Education, Bangalore	17-July-2015	10-June-2016	0	11
5	Asso. Prof.	Adithya Institute of Technology, Coimbatore	Jun-10	16-July-2015	5	1
6	Asst.Prof	Dr.N.G.P Institute of Technology, Coimbatore	13-Jul-09	31-May-10	0	11
7	Asst.Prof/ Sr. Lecturer	Bannari Amman Institute of Technology, Sathyamangalam	5-Jan-05	29-May-09	4	5

8	Sr. Lecturer / Lecturer	Sri Krishna College of Engg & Tech, Kuniamuthur, Coimbatore	20-Aug-01	30-Dec-03	2	5
9	Lecturer	Mahendra Engineering College, Tiruchengode	2-Jun-00	20 Aug -01	1	3
10	Lecturer	Sri Krishna College of Engg & Tech, Kuniamuthur, Coimbatore	10-Aug-98	18-Mar-00	1	8

Conference Presentations

1.   Dr Lakshmi D, Abhinav Prakash, Ramesh Chandra Panda, and AmritaSnake Classification 'Venomous and Non-Venomous' using Transfer Learning Techniques on Indian Species: A Life-Saving Application. (Presented on March 19th, 2021 in the European, Asian, Middle Eastern, North African Conference on Management & Information Systems (EAMMIS) and won the best paper award.

2.   Amrita, Ramesh Chandra Panda, and Dr Lakshmi D, A Novel Hydro Renewable Power Platform: A Sustainable Innovation (Presented on March 19th, 2021 in the European, Asian, Middle Eastern, North African Conference on Management & Information Systems (EAMMIS).

3.   Dr . Lakshmi D, Mr. Srinivas Reddy Gurrala and Mr. Manideep Kuncharam, A Comparative Study on Breast Cancer Tissues Using Conventional and Modern Machine Learning Models, SCI-2020 (4th INTERNATIONAL CONFERENCE ON SMART COMPUTING & INFORMATICS)

4.   Dr. D. Lakshmi & **Mr. C P Pavan Kumar Hota** , A Study on Adaptive Tutoring System using Learning Analytics, International Conference on Advances in Computing and Information Technology (ICACIT '19).

5.   Dr. D. Lakshmi & U.Chandrasekahar Mining Maximal Association Rules on Soft Sets using Critical Relative Support based Pruning, Springer Conference at Panimalar Engineering College, Chennai, 22nd & 23rd March 2019.

6.   Dr. D. Lakshmi & U.Chandrasekahar, "A New Student Model for an Intelligent Tutoring System Using Analytical Hierarchy Process" bearing the paper ID SCOPUS1077, International Conference on Research Advancements in Applied Engineering Sciences, Computer and Communication Technologies 12th & 13th July 2018, ICRAAESCCT-2018.

7.   Dr. D. Lakshmi &, Mr. S. Naveen Kumar, "**Cloud Platform (SaaS) for the Development of Logical Reasoning and Programming Practices**", Fifth International Conference on "Emerging Research in Computing, Information, Communication, and Applications" (**ERCICA-18**).

8.   Dr. D. Lakshmi & **Mr. C P Pavan Kumar Hota, Use Of Web 2.0 Educational Software's In The Higher Education A Multi-Dimensional Analysis, Ap International Conference On Transformations In Engineering Education July 15-17, 2018; SRM University, Amaravati, AP.**

9.   Dr. D. Lakshmi & Mr. S. Naveen Kumar Use, of e-Learning Platform (eLab v2.0) in Developing Logical Reasoning and Programming Skills - The State of Art ", Transforming Education Conference for Humanity (TECH 2017) at Visakhapatnam during 16th December to 18th December 2017.

10.   Lakshmi Dhandabani & Rajeev Sukumaran, 2016, "Multi-Model Learning Practices Using TPACK Framework", International Conference on Indian Languages and their Kaleidoscopic Role in the Advancement of Literature, Teaching, Education, and Culture, Organized By Field Marshal K. M. Cariappa College, Madikeri In Association With International Association of Academicians and Researchers, Pune.

11.   A H Parvin, Lakshmi D, Use of TPACK Framework Model in English Language Teaching, Two day International Conference on Emerging Approaches and Methods in English Language Teaching-(EAMELT) (from text to book to mind in association with The Global Association of English studies All India Network of English Teachers AINET) December 9-12-2015 and 10-12-2015.

12.   Lakshmi Dhandabani & Rajeev Sukumaran , Use of Multiple Intelligences and Instructional Technologies in Learning Theory of Computation: An Experimental Case Study, 2015 International Conference on Advanced Computing and Communication Systems (ICACCS -2015), IEEE, Jan. 05 – 07, 2015, Coimbatore, INDIA.

13.   Lakshmi Dhandabani & Rajeev Sukumaran , Exploring Relationship between Thinking And Learning Styles: An Experimental Study Towards Improving Learning Of Theoretical Courses In Engineering, 2015 International Conference on Computer Communication and Informatics (ICCCI -2015), IEEE, Jan. 08 – 10, 2015, Coimbatore, INDIA.

14.   Lakshmi D, D. Senthil Kumaran, Multifaceted Training Model for Enhancing the Capability of Acquiring Skills towards Better Placements in Engineering Education: A Case Study, 2nd National Conference on Sustainable Institute Industry Partnership SIIP – 2014, at IIT Madras, Chennai on 26th August 2014.

15.   Lakshmi Dhandabani & Rajeev Sukumaran , Use of ICT in Engineering Education: A Survey Report, 2014 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC), Coimbatore, INDIA. [SCOPUS INDEXED]

16.   Lakshmi Dhandabani & Rajeev Sukumaran , Use of ICT in teaching "Theory of Computation": An experimental case study at IEEE Conference on MOOC technologies at Poornima Institute of Technology, Jaipur. December 2013. Won the **best track award** for the presentation. The paper is available at DOI: 10.1109/MITE.2013.6756316

17.   Lakshmi Dhandabani, Classification Rule Discovery with Ant Colony Optimization Meta-Heuristic in Third National Conference on Cutting Edge Technologies in Power Conversion and Industrial Drives, at Bannari Amman Institute of Technology, Feb 2007.

Journal Publications

1.   Dr. B. Mrunalini Sasanka, Dr. Lakshmi Dhandabani, Integration Of ICT In Language Classroom – Classroom Experiments In Teaching And Learning, Journal of Critical Reviews, Year: 2020, Volume: 7, Issue: 19,

2.   Dr. D. Lakshmi & U.Chandrasekahar Mining Maximal Association Rules on Soft Sets using Critical Relative Support based Pruning, Springer Lecture Notes on Data Engineering and Communications Technologies series, SCOPUS, Book Chapter.

3.   **"A new student model for an intelligent tutoring system using analytical hierarchy process"** in International Journal of Engineering & Technology (UAE) **(IJET)** in *Vol.7, No.3.29, Page 433-442, 2018*which is **SCOPUS INDEXED JOURNAL** (*www.sciencepubco.com/index.php/IJET*). ISSN: 2227-524X

Published by Science Publishing Corporation (SPC),

URL: https://www.sciencepubco.com/index.php/ijet/article/view/19285/8903

4. Vijay Bhasker V and Lakshmi D, "Individuals Personality – Multiple affects – Gender Differentiation!?, AIMS-Journal of Research, ISSN 2321-8487, Vol 12, Issue 2, Sep 2015.

5. <u>Lakshmi Dhandabani</u> & Rajeev Sukumaran 2015, 'Correlational Analysis between Brain Dominance and Multiple Intelligences', World Academy of Science Engineering and Technology WASET , (Print) : 2010376X, (Online) :20103778, , France, vol. 9, no. 2, pp.1108-1116. (ISI 0.1)

6. <u>Lakshmi Dhandabani</u> & Rajeev Sukumaran 2015, 'Exploring the Relationship between Academic Performances and Brain Dominances', Indian Journal Science and Technology. ISSN (Print) : 0974-6846 ISSN (Online) : 0974-5645, Indian Journal of Science and Technology, Vol 8(9), pp. 889-896, DOI: 10.17485/ijst/2015/v8i9/56513. (SCOPUS 1.4053)

7. <u>Lakshmi Dhandabani</u> & Rajeev Sukumaran Causal Effect Analysis between Brain Dominance and Multiple Intelligences, International Journal of Applied Engineering Research, January 2015, Vol. 10, No. 2, Print-ISSN: 0973-4562. [SCOPUS INDEXED].

8. <u>Chinnu Thomas & D. Lakshmi</u> & Gesture-Based Computing as an Alternative to Mouse by Calibrating Principal Contour Process Actions, International Journal of Research in Advent Technology, Vol.2, No.5, May 2014, E-ISSN: 2321-9637.

9. <u>P. Dhivya & D. Lakshmi</u> & A Comprehensive Review of Image Retrieval Based On Example Video Clip, International Journal of Research in Advent Technology, Vol.2, No.5, May 2014, E-ISSN: 2321-9637.

Book Chapter(s)

1. Educational Technology Too and Software for Virtual, Flipped and Blended Learning, Immortal Publication, ISBN: 979-8-6432-1141-9.

Book Publication

1. Theory of Computation, Charulatha Publications, Chennai, 2006, ISBN: A100009222.

2. "Leading Education in Age of Disruption", An Educator Guideline Series with the ISBN Number: 978-93-5526-730-6.

Indian Patent Publication

1. Provisionally published patents waiting for examination: Dynamically Understanding 3D Visual Scenes Using Deep Learning, Application Number: 202041002488, IP India.

2. Provisionally published patents waiting for examination: Hybrid Renewable Power Platform: Harvests Wind, Solar and Water Current Power from Running Water-Channel. Application Number: 332221 -001, IP India.

3. Provisionally published patents waiting for examination: A Novel Phenotypic Antimicrobial Resistance Testing Using Cost-Effective Integrated Biochip, 202031036654, IP India.

4. Provisionally published patents waiting for examination: A Novel Nanosilver Hand Rub Sanitizer Gel, Application Number: 202031037352-001, IP India.

5. Provisionally published patents waiting for examination: IoT Based Smart Electro-Mechanical Standing Ventilator, Application Number: 202031045420, IP India.

6. Provisionally published patents waiting for examination: A novel smart carbonless cooking Gasifier, Application Number 202031044344

Copyrights IP India

1. Arogya Odisha-Mobile App-Based Empowering TeleMedicine, Diary Number: 14815/2020/CO/L (Filed Under Copyright Act) Date: 03/10/2020

2. Investigations On Behavioral Analysis For Improving Learning Practices, Diary Number: 16131/2020/CO/L (Filed Under Copyright Act) Date 17/10/2020

3.

Australian Patents

1. AQUA LIFE: A COMPACT DEVICE EXTRACTING DRINKABLE WATER FROM SEAWATER ApplicationNumber-2021100286, Patent application type-Innovation, Filing date   2021-01-17
Granted

2. A Novel Indigenous Sustainable Vaccine Carrier for Maintenance of Cold Chain, ApplicationNumber-2021101099, Patent application type-Innovation, Filing date   2021-01-17

Membership of Professional Bodies

IEEE Member, Member of the Computer Science Teachers Association (CSTA), IAENG - International Association of Engineers, IFERP

Online Certifications

1. Big Data analytics – Demo from Big Data University

2. Brief Introduction to Psychology, NPTEL, IIT Kanpur

3. "Quizlet-A cool for teachers" online course June 2nd, 2018

4. Edpuzzle Big Goals on 26-05-2018

5. Khan Academy for Teachers 101 May 14th, 2018

6. Google Digital Unlocked "The Online Marketing Fundamentals"

7. Using proper manuscript language by Elsevier Researcher Academy Certificate of Completion

8. Problem-Solving through C Programming, NPTEL

9. Mentorship Certification for "Problem Solving through C Programming, NPTEL"

10. Workshop on "IoT" Texas Instrument Certification

11. Python for Data Science, NPTEL

12. Advanced Deep Learning by Bennett University through leading India AI

Book Reviewer

Cambridge University Press, PEARSON Education, and Tata Mc Graw Hill Publications

Workshops/Conferences/Seminar/Guest Lecture/Conclave Attended

1. Attended NASSCOM Data Analytics Workshop 20-03-2018 to 24-03-2018.

2. Attended IBM 'Mobile application Development Workshop' at AIMS Institute of Higher Education, Bangalore in the month of December 2015.

3. Attended IBM 'HADOOP and Map Reduce workshop' at AIMS Institute of Higher Education, Bangalore in the month of November 2015.

4. Attended IBM 'SPSS training program' at AIMS Institute of Higher Education, Bangalore in the month of August 2015.

5. Became jury for many symposiums and n conferences.

6. Editor for Vivega - College Newsletter at Adithya Institute of Technology

7. Organized many orientation programs as a part of Women Development Cell both at Bannari Amman Institute of Technology and Adithya Institute of Technology.

8. Organized Memory Improving Techniques at both Bannari Amman Institute of Technology and Adithya Institute of Technology.

9. Organized five yoga programs, two eye and general checkups at Adithya Institute of Technology.

10. Internal Quality Auditor Training program at Bannari Amman Institute of Technology

11. A two-day workshop on Concepts of Research and its Techniques on 25th & 26th 2014 at Adithya Institute of Technology.

12. Two-day national level workshop on Vulnerable Web Applications and Cyber Security on 19th & 20th August 2014 at Adithya Institute of Technology.

13. Workshop on Principles and Practices of Learning for Effective Teaching at Poornima Institute of Engineering & Technology, Jaipur in December 2013.

14. Workshop on Exploring Engineering Education Research at Poornima Institute of Engineering & Technology, Jaipur on December 2013.

15. A two-day workshop on Data Structures and Algorithms by Dr.D.S.Guru, Professor, the University of Mysore at Adithya Institute of Technology, December 2013.

16. A one-day workshop on Android Application Development jointly organized by LANSA Informatics Pvt Ltd and JP Infotech on 24/08/2013.

17. Two-day Workshop on Image and Video Processing Dr.Jharna Majumdar, Retired Scientist DRDO, Bangalore at Adithya Institute of Technology, June 2013.

18. Awarded Certification of Appreciation for Yoga Club Activities for the academic year 2010-2011 at Adithya Institute of Technology.

19. Awarded Certificate of Appreciation for Attaining 100% results for the academic year 2010-2011 for Advance Java Programming for final year IT at Adithya Institute of Technology.

20. One day Faculty Development Program on Web 3.0 Technologies at Dr.N.G.P Institute of Technology.

21. A one-day workshop on Oracle was held on 7th November 2009 at KGISL, Coimbatore.

22. National Level workshop for Eminent Technologies of Open Source Systems conducted by HCL and Dr.N.G.P Institute of Technology in October 2009.

23. One day Sensitization-Cum-Awareness Programme on Technology Information Facilitation at Bannari Amman Institute of Technology in December 2007.

24. One day workshop on Nanotechnology and its applications, Organized by IIT Chennai and Bannari Amman Institute of Technology

25. Attended Training the Trainer Programme on 8th and 9th December 2006 at the campus of M/s. Infosys Technologies Limited, Chennai.

26. A two-day workshop on Design and Analysis of Algorithm conducted by Dr.P.Nagabhushan at Bannari Amman Institute of Technology in August 2006.

27. One week short-term course on Web Technologies at SSN College of Engineering, Kalavakkam in June 2005.

28. Quality System Awareness took by Zandig TQM Solutions Private Limited in April 2005.

29. A workshop on 'Re-Engineer' teaching skills was taken by Mrs.Sushila Balagurusamy at R.R Engineering Technology in January 2003.

30. National Level Seminar on Cognition & Recognition at Sri Krishna College of Engg & Tech.

31. State Level Seminar on Mobile Computing at Sri Krishna College of Engg & Tech.

32. Personality Development Program took by Mr.Suresh Panjabi at Sri Krishna College of Engg & Tech.

33. Two-day residential meditation program at Chinmaya Vidyalaya, Coimbatore sponsored by Sri Krishna College of Engg & Tech.

34. One-day Yoga Program at Sri Krishna College of Engg & Tech conducted by Vethathiri Maharishi Manavalakalai Mandram.

35. Faculty Development Program ON Teaching Technology and Counselling Skill took by Abirami Academy at Sri Krishna College of Engg & Tech in November 2001.

36. Third National Level Conference on Soft Computing at P.S.G College of Technology, Coimbatore in 2001.

37. One day Seminar on Soft Computing at Bharathiar University in 1999

Personal Attributes

➢ Effective communication & presentation skills

➢ Fond of gaining new experiences

➢ Sincere towards my work

➢ Readily accepting the challenges

➢ Involvement in work with continuous improvement at all levels

➢ Having exposure to the TPACK framework

➢ Expertise in designing and working with MOODLE educational software

➢ Having exposure in the arena of educational psychology

➢ Exposure to nature cures solutions

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Subject Expertise

➢ Machine Learni9ng & Deep Learning

➢ Internet of Things

➢ Educational Technology

➢ Educational Psychology

➢ Theory of Computation

➢ Compiler Design

➢ System Software

➢ Data Structures and Algorithms

➢ Data Warehousing and Mining

➢ Web Technologies

Responsibilities held so far

➢ Interview panel member

➢ Project panel member

➢ Students Mentoring

➢ Project Coordinator

➢ Students Association In Charge

➢ Project Guide both for B.E and M.E Level

➢ Short term course Coordinator

➢ GATE Coaching Committee member

➢ Yoga Centre In-charge

➢ Deputy Warden for more than 10 years

➢ Faculty Recreation Club In-charge

➢ IAS Exam Coaching Coordinator

➢ National Level Technical Symposium (Futura'06) Project Coordinator

➢ National Level Technical Symposium (Futura'07) Project Coordinator

➢ National Level Technical Symposium (Futura'08) Coordinator

➢ Women Development Cell In-charge

➢ HOD-In charge during 1998-2000 at Sri Krishna College of Engg. & Technology, During 2005-2009 Acting HOD at Bannari Amman Institute of Technology, HOD-In Charge during 2013-2014 at Adithya Institute of Technology.

Total Years of Experience

U.G Teaching Experience: 20

P.G Teaching Experience: 9

Educational Research Officer : 3

Thesis Abstract

In the conventional education system parameters like learning capacity, grasping skills, logical skills, mathematical skills, emotional quotient, rapport skills and language skills of students can be perceived easily. On the other hand, understanding students' strength, weaknesses, and attitude become a challenge in virtual education. To date understanding students' thinking ability, strengths, weaknesses, behavior, and learning capacity has not been considered in the Virtual Learning Environment (VLE). Online courses are attracted by self-determined and intellectually capable students. The student model is crucial for an intelligent tutoring system. It provides an ability to adapt to the needs and knowledge of an individual. The prime objective of this research study is to design the 'student model' based on individuals' 'biopsychological potential'. A major constituent of this research study includes educational technology, educational psychology, and data mining techniques.

The first phase of this research study focuses on primary data compilation using psychometric assessments, to categorize the cognitive traits and personality traits of every individual. The data samples (n=1145) are collected from 16 engineering colleges from Tamil Nadu, Kerala, and Puducherry.

Primary datasets are collected by administering suitable psychometric inventories such as Benziger Thinking Style Assessment (BTSA) for Brain Dominance Analysis, Kolb's Learning Style Inventory for learning style identification, Howard Gardner's MI inventory for multiple intelligence identification, and Paul Costa R. Robert McCrae's BIG Five personality identification.

Rule-based classification technique is used to understand the individual's innate capacity (Model-1 Dataset) and their holistic developmental characteristics (Model-2 Dataset). From these two models, the Personalized Profiling System (PPS) is built to generate the psychometric profile for all the individuals. Subsequently, feedback was collected in order to verify the system's robustness. PPS can be treated as a 'student model' for Virtual Learning Environment (VLE). The statistical measures Chi-Square

analysis, Pearson inter and intra correlation analysis, and linear regression analysis are carried out. The statistical investigations are carried out to analyze the strength of association and inter-dependency between the dependent and independent variables.

The clustering technique is used to handle the diversified group of students into four different categories. The mean-difference clustering method is proposed to customize personalized education. Personalized education methods are suggested for all four groups of students.

In order to classify the unseen data, both categorical data and numerical data sets are used. The clustered data is classified using 6 different classifiers and 5 different classifiers in order to induce an efficient classification. Finally, the framework model is proposed for an Intelligent Tutoring System (ITS) in order to provide a personalized education considering an individual's thinking style, learning style, multiple intelligences, and personality traits. The proposed 'Student Model' consists of a Personalized Profiling System (PPS), classifier, and the outcome of Analytical Hierarchical Process (AHP).

Personal Profile

Marital Status: Married

Husband's Name: S. Karunakaran

Gender: Female

Date of Birth: 06/06/1977

Age: 44

Nationality & Religion: Indian, Hindu

Place of Birth: Attur, Salem

Known Languages to speak: Tamil, English, Telugu, Kanada, Malayalam

Known Languages to write: Tamil, English

Hobbies: Meditation and Yoga, Blogging, Involvement in the social activities, Writing Tamil Poems, Voracious reader, Gardening, Volunteering, Playing Chess, Playing Shuttle Batmitton, Counseling, Public Speaking, Nature Therapist.

Short Biography

M. Arjunkumar

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Dr.D.Lakshmi, presently working as a Senior Associate Professor in the School of Computing & Assistant Director, Centre for Innovation in Teaching & Learning at VIT Bhopal University, Madhya Pradesh. Till February 2021, she was designated as an *Educational Research Officer* at *Vishnu Educational Development and Innovation Centre (VEDIC)* and *Associate Professor at B V Raju Institute of Technology* run by Shri Vishnu Educational Society, Hyderabad from 2016 to Feb 2021. She has been working in the educational sector since 1998. She has more than 22 years of teaching experience. Her key focus is on exploring the dynamics of learning, dynamics of the learner, and classroom dynamics, suitable to accelerate the learning efficacy of higher education students. Her research areas include educational technology, educational data mining, virtual education, and educational psychology. She has been actively involved in educational research and her research papers have been published both in international conferences as well as in peer-reviewed journals. Her main responsibilities at VEDIC include conducting workshops to foster quality initiative, quality sustenance and quality improvement in higher education, e-learning initiative, providing workshops to faculty members who are interested in integrated technology and researching educational trends.

Her *Ph.D.* research work is an interdisciplinary work "*Investigations On Behavioral Analysis for Improving Learning Practices*" *in* the cognitive science domain using data analysis and mining techniques. The prime objective of her research work is to build the "*Student Model*" for the *Intelligent Tutoring System (ITS)* based on '*bio-psychological potential*' grounded on the cognitive features such as Brain Dominance, Learning Style Preferences, Multiple Intelligences, and Personality models for the purpose of assessing an individual's innate capabilities. She completed her doctoral degree from *Anna University* in May 2017 under the supervision of *Dr. Rajeev Sukumaran, TCL, IIT-Madras.*

Earlier, she obtained her *Master of Technology* in *Computer Cognition Technology* with '*distinction*' from the *University of Mysore*, Mysore, and *Bachelor of Engineering* in *Computer Science & Technology* from *V.R.S. College of Engineering,* Madras University. My career, spanning over 19 years, started from humble beginnings as a *Software Instructor* in a computer academy which was located in a remote town, through various challenging and rewarding teaching assignments, such as: *Lecturer* and *Faculty Advisor* at *Sri Krishna College of Engg. & Tech*, Coimbatore in 1998; then as *Lecturer* at *Mahendra Engg. College*, Tiruchengode; a second stint at *Sri Krishna College*, Coimbatore, as *Lecturer CSE*, as *Sr. Lecturer* at *Bannari Amman Institute of Technology*, Coimbatore, later promoted as *Asst. Professor*, and at *Dr.N.G.P Institute of Technology,* Coimbatore, as *Asst. Professor.* She had joined *Adithya Institute of Technology*, Coimbatore, as *Asst. Professor*, where she had been promoted to the role of *Associate Professor-CSE* and *HoD of CSE/ITB,* and *Associate Professor, Department of Information Technology* at *AIMS Institute of Higher Education*, Bangalore. At AIMS institute, she has gained international exposure in handling various courses for international students and students from all over India too. This experience had brought her new insights into the different geographical perceptions on the academic and cultural context.

With reference to the academic interests, she is naturally aligned to the teaching and computation, as her specialization and core expertise lie in *Theory of Computation*, her favorite subject on which she has authored and published a book, *Theory of Computation*, and a handbook, and been the first Indian woman author in the subject. Her research paper presentation, *Use of ICT in Teaching Theory of Computation: An Experimental Case Study* at the IEEE Conference on MOOC Technologies at Poornima Institute of Technology, Jaipur (December 2013), won the **Best Paper Award**. She has addressed innumerable guest lectures, conducted and organized several Faculty Development Program (FDP) Training *(covering approximately ~50,000 plus faculty members including TEQIP, SERB, SWAYAM, DST, AICTE, MHRD, ATAL sponsored workshops and also self-financed workshops across India from different STEM Educational institutions)* conducted numerous workshops at JNTU-

Hyderabad on various titles in association with UGC-HRDC, and have served as Subject Matter Expert and Consultant on *Theory of Computation*. The passion and deep reverence with which she approaches the subject, both as a student and as a teacher, have earned her much admiration and adulation, as well as reaping her rich rewards in terms of knowledge and experience.

She has been invited as a *jury for the national level conferences* and national level student's symposium. She had been invited as a Session *Chair and keynote speaker* as well. She had reviewed several books for Tata McGraw Hill and Pearson Publishers and conference papers and Journal papers too.

She had presented papers in 17 *international conferences* and published *9 international journal papers, 2 book chapters, and 8 Indian patents provisionally published and waiting for examinations. 2 Indian Copyrights have been granted. 4 Australian patents have been filed and all have been granted. Recently March 2021 her paper has owned the best paper award in the Springer Conference on Snake Classification Using Deep Learning Models: A life-Saving App* Currently, her research work has been submitted to two journal papers and two book series which are under review. She has vast experience in attending more than 100 workshops, conferences, and seminars related to her field of interest. She is also keen in continuous learning and completed a few online certification courses. She has completed *more than 100 certification workshops/programmes* both online and offline.

It is her firm belief that given the opportunity to work in any institution, she shall find the right avenues to express her true capabilities to not only extend her own frontiers but also to transcend the institution to a different progressive dimension. She had served in various academic institutions in various capacities and roles. She had been involved in developing several software(s) for academic usefulness as well as instructional interventions. She had built a software model based on 'bio-psychological potential' grounded on cognitive features such as Brain Dominance, Learning Style Preferences, Multiple Intelligence, and Personality. This software is named KYC *(Know Your Calibre)*.

With the passion to mentor students with the holistic approach, she has gained an adequate amount of exposure towards secondary specialization such as life sciences, food and nutrition, cognitive science, yoga and meditation, educational psychology, and educational technology.

On a personal level, she has consistently excelled at both academia and extra-curricular activities, such as her interest in natural medicine, reading, and spirituality. She is also actively involved in co-curricular activities, such as seminars and conferences, doing educational research, discharging her familial and social responsibilities, as well as devoting time to other interests such as natural medicine, gardening, extensive reading on diverse subjects, and spiritual travel. She can speak all the south Indian languages. She is a blogger as well.

YouTube Channel:

https://www.youtube.com/c/DrLakshmiD/videos

M. Ayyankumar

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Areas of expertise: Educational research methodologies, IQAC, Curriculum Planning, Learning Assessment, improving learning using Cognitive Psychology-based Assessment, Accreditation (NBA/NAAC), expertise in interactive video material creation as well in video editing.

Technical Domain: Computer Science and Engineering - Data Structures, Theory of Computation, Compiler Design, Education Technologies, Data Analytics, Machine Learning, Internet of Things, Deep Learning, and Big Data Analytics.

I trust that you will find my profile synchronous with your requirements.

Thanking you,

Sincerely yours.

Dr D. LAKSHMI

TITLE: Multi Criteria Decision Making

Multi-criteria decision making (MCDM) also referred to as multiple criteria decision analysis (MCDA), is a research area that involves the analysis of various available choices in a situation or research area which spans daily life, social sciences, engineering, medicine, and many other areas. MCDM is one of the most popular decision-making tools utilized in various fields

MCDM analyses the criteria to determine whether each criterion is a favorable or unfavorable choice for a particular application. It also attempts to compare this criterion, based on the selected criteria, against every other available option in an attempt to assist the decision maker in selecting an option with the minimal compromise and maximum advantages. The criteria used in the analyses of these criteria can be either qualitative or quantitative criteria.

Division of MCDM can be made into two categories based on the method used to determine the weight of each alternative.

1.**Compensatory decision making:** Involves the evaluation of the criteria, of the criteria including the weak points and strong points of the criteria and allows the strong points of each criteria to compensate for the weak points, thereby putting all the criteria of the criteria into consideration. An example of a compensatory decision-making tool is the analytical hierarchy process (AHP)—a technique used mostly when the environment for the analysis is complex. It is used in the comparison of criteria that are difficult to quantify.

2.**Outranking decision making:** This method compares the criteria of the criteria in couples in order to determine which criteria ranks higher than the others based on the comparisons. A popular example of an outranking decision-making method is elimination and choice expressing reality (ELECTRE), a method that is used to choose, rank, and sort alternatives to solve a problem.

Application of multi-criteria decision-making (MCDM) theory is the use of computational methods that incorporate several criteria and order of preference in evaluating and selecting the best option among many alternatives based on the desired outcome. It is applied to different fields to obtain an optimum solution to a problem where there are many parameters to consider that cannot be decided by the users' experiences. The application gives a ranking result based on the selected criteria, their corresponding values, and assigned weights. The application of MCDM theory in biomedical engineering (MCDM) theory is the use of computational methods that incorporate several criteria and order of preference in evaluating and selecting the best option among many alternatives based on the desired outcome. It is applied to different fields to obtain an optimum solution to a problem where there are many parameters to consider that cannot be decided by the users' experiences. The application gives a ranking result based on the selected criteria, their corresponding values, and assigned weights. The application of MCDM theory in biomedical engineering and healthcare is a new approach that can be enormously helpful for patients, doctors, hospital managers, engineers, etc. Whether it is improving healthcare delivery or making a sound and safe decision for the benefit of the patient, healthcare

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professionals and other decision makers are always entangled with decision-making dilemmas. In real-life problems, there are many critical parameters (criteria) that can directly or indirectly affect the consequences of different decisions. Stakes are always high whenever human life is in danger, so it is always important to make the right decisions. When deciding whether to use a particular medication, treatment, or medical equipment, not only are the problems with multiple criteria very complex, but multiple parties are also deeply affected by the effects.

There are many methods available for solving MCDM problems. However, the MCDM methods discussed in this textbook are the Analytic Hierarchy Process (AHP), Technique for Order of Preference by Similarities to Ideal Solution (TOPSIS), Elimination Et Choix Traduisant la Realité (ELECTRE), Preference Ranking Organization Method for Enrichment of Evaluations (PROMETHEE), ViseKriterijumska Optimizcija i Kaompromisno Resenje (VIKOR), and Data Envelopment Analysis (DEA). AHP is based on mathematics and psychology. Rather than recommending the best alternative, AHP encourages decision makers to find a solution that better suits their goal and perception of the problem. It offers a comprehensive and rationally oriented context in which the decision problem can be organized, quantified, and evaluated. TOPSIS is a very useful MCDM method. This is an alternative approach that measures weights for each parameter, normalizes scores for each criterion, and determines the numerical difference for each alternative and the optimal alternative, which is the best score for every criteria. ELECTRE is another popular MCDM method used to eliminate any unacceptable alternatives. PROMETHEE is suitable when groups of people are working on complex issues, particularly those with various parameters that require several views and viewpoints that have long-term consequences in their decisions. This provides unique advantages when it is difficult to quantify or compare important elements in the decision, or when cooperation between departments or team members is limited by their different requirements or expectations. Other multicriteria decision-making MCDM methods that will be discussed include VIKOR, fuzzy logic–based MCDM methods, and DEA.

There are many thousands, if not millions, of possible applications for Multi-Criteria Decision Analysis (MCDA), also known as Multiple Criteria Decision Making and Multi-Criteria Decision-Making (MCDM). Most decisions made by individuals and groups that involve ranking or choosing between alternatives (including people) are amenable to MCDA / MCDM.

Here are some mainstream examples of applications from the worlds of business, nonprofits, government, health, education and personal decision-making:

- Short-listing job applicants
- Selecting projects or investments for funding
- Picking microfinance or aid programs for support
- Prioritizing local or central government spending
- Prioritizing patients for access to health care (e.g. NZ health system success story)
- Ranking researchers or students for research grants or scholarships
- Choosing a new home, car or smartphone, etc

Common to these examples and all MCDA applications in general is that they involve alternatives (including people) being ranked or chosen based on considering multiple criteria together. Some applications also include the allocation of budgets or other scarce resources across alternatives, with the objective of maximizing 'value for money'.

Traditional intuitive decision-making compared to MCDA

Of course, considering multiple criteria when ranking or choosing between alternatives is a natural approach for making decisions that is as old and fundamental as human history (see famous quotes). However, 'traditional' intuitive decision-making – how most people make their everyday decisions – typically involves evaluating the criteria and the trade-offs between them in an intuitive or holistic fashion.

In contrast, MCDA / MCDM, a sub-discipline of operations research with foundations in economics, psychology and mathematics, is concerned with formally structuring and solving decision problems. Most MCDA methods, which are increasingly supported by specialized software (e.g. 1000minds), involve the explicit weighting of criteria and the trade-offs between them.

Overall, MCDA is intended to reduce biases from decision-makers relying on their 'gut feeling', and also group decision-making failures (e.g. 'groupthink'), that almost inevitably afflict intuitive approaches. By making the weights and associated trade-offs between the criteria explicit in a structured way, MCDA results in better decision-making.

How does Multi-Criteria Decision Analysis work?

MCDA / MCDM, in essence, involves these four key components:

- **Alternatives** (or individuals) to be ranked or chosen from

  Any number of alternatives may be included in the MCDM – depending on the application, ranging from a minimum of two (otherwise there wouldn't be a choice to make) up to 10s, 100s, 1000s or even millions of alternatives.

- **Criteria** by which the alternatives are evaluated and compared

  For most applications, fewer than a dozen criteria is usually sufficient, with 5-8 fairly typical, which may be quantitative or qualitative in nature.

- **Weights** representing the relative importance of the criteria

  As explained later in the article, there is a variety of methods available for determining the weights on the criteria, representing their relative importance.

- **Decision-makers** and potentially other stakeholders, whose preferences are to be represented

Again, depending on the application, any number of decision-makers and potentially other stakeholders may be involved, ranging from just one (e.g. you!) up to many 1000s of people.

MCDA is about getting these four things right! Do so and you'll be more likely to make the 'right' decision (though, of course, there are no guarantees, as things can change or the unexpected happen).

One-off versus repeated applications

MCDA / MCDM tools can be used for one-off (e.g. ranking applicants applying for a job or prioritizing new business projects) or repeated applications (e.g. prioritizing patients as they present for treatment).

One-off applications involve ranking particular alternatives (or individuals) that are already known to, or under consideration by, the decision-maker. In these applications, the number of alternatives is usually in at most the 10s or 100s – e.g. 250 people applying for a job, or 80 business projects to be prioritized.

In contrast, repeated applications involve ranking alternatives in a pool that is continually changing over time, involving potentially many 1000s of alternatives. For example, in health and education applications, new patients or students ('alternatives') may need to be prioritized – e.g. for treatment or scholarships – on an ongoing basis (e.g. hourly or daily), including potentially in 'real time'.

The dynamism of repeated applications means that the MCDA process needs to be capable of including potentially all hypothetically possible alternatives (including people, e.g. patients or students) that might ever occur. Accordingly, MCDA outputs are increasingly incorporated into information systems (e.g. as used by New Zealand's Ministry of Health).

Overview of the MCDA / MCDM process

Most MCDA applications are based, at least implicitly, on the process represented in Figure 1 below reproduced from Belton & Stewart (2002). The "Model building" and "Challenging thinking" stages in particular are often supported by specialized MCDA software, as discussed later below.

As represented in the diagram, the iterative nature of the process, with multiple possible feedbacks and cycles, serves to emphasize that MCDA is intended to function as a *tool to help people*, individually or in groups, to reach a decision – i.e. their decision (made by humans), not the tool's decision.

As well as more transparent and consistent decision-making, MCDA can also be used to facilitate the participation of a wide range of stakeholders, systematically taking their preferences into account. MCDA results can also be used to communicate and justify the final decision to stakeholders.

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(Accredited with B^{++} Grade by NAAC)

Ph: 08816-221238 Email: dnrcet@gmail.com website: https://dnrcet.org

REPORT ABOUT THE PROGRAMME

Dt: 09-08-2022

Title of the Programme: One Day Workshop on Research Methodology: Tools & Techniques Using R Programming

Inauguration Date & Venue: 8th Feb 2022 & DNRCET Seminar Hall

Organized By: Department of Electrical & Electronics Engineering, DNRCET

Resource Person: Dr. S. S Rao, Asst. Prof & Head ISTE

Chief Guest:

Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 21

Concept:

R is a free, open source statistical programming language. It is useful for data cleaning, analysis, and visualization. It complements workflows that require the use of other software. You can read more about the language and find documentation on the R Project Website. It is widely used as a statistical software and data analysis tool. R generally comes with the Command-line interface. R is available across widely used platforms like Windows, Linux, and macOS. Also, the R programming language is the latest cutting-edge tool.

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One day Workshops on Research Methodology: Tools & Techniques Using R Programming 8th Feb 2022

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 8/02/22	
			FN	AN
1	K. RAJARAJESWARI	CSE		
2	E. YOHOSHVA	CSE		
3	U. Susmitha	CSE		
4	N. Bhagvathi	CSE		
5	B. Vamsidhar	BSH		
6	G. MOSHE	BSH		
7	N.V.S.L.Sowjanya	ECE		
8	M. Srinu	EEE		
9	K. Siva Syamala	CSE		
10	Dr. A.Ramamurthy	CSE		
11	v. S. Sripes	BSH	Sarith..	Sarith..
12	CH. Renuka Devi	BSH		
13	V. R.E.S.S. Kumar	MBA		
14	N. Raju	BSH	Raju.	Raju
15	Praveen	BSH		
16	Jayalakshmi	Bs H		
17	Dr. R.V. Jagapatha R	MBA	SiRao.	JsRu..
18	A. V. Krishna	BSH	V. Uos	V. Kenc
19	Dr.A.P.Ramesh	ECE		
20	G.V. dadya sriram	CSE		
21	E. Ramyalakshmi	CSE		

M. Ajaykumar

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PERSONAL PROFILE

Dr. S. Srinivasa Rao
B.E (CSE), M.Tech (CSE), Ph.D (CSE)
Assistant Professor & Head
ISTE,.

Areas of Interest:

- Artificial Intelligence
- Natural Language processing
- Machine Learning
- Deep Learning
- Information Extraction
- Data Analytics

Academic Qualifications

1. Ph.D in Computer Science Engineering, J.N.T.U.H (2006-2010)

2. M.Tech in Computer Science Engineering, SASTRA University with First Class with Distinction (2003-2005)

3. B.E in Computer Science Engineering, Bharathidasan University.

Teaching Experience

Areas of Interest:
Artificial Intelligence
Natural Language processing
Machine Learning
Deep Learning
Information Extraction
Data Analytics

Events Participated/Organized
1. Coordinated for a FDP on Deep Learning, UGC-ASC, JNTUH, 30-08-2021 to 06-09-2021
2. Coordinated for a FDP on Artificial Intelligence and Machine Learning, UGC-ASC, JNTUH, 28-06-2021 to 03-07-20

Contact:

Dr. Sanampudi Suresh Kumar
Assistant Professor & Head
Information Technology
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Research Paper Writing Using R Programming

You should start writing your paper *while* you are working on your experiment. Prof. George Whitesides says: "A pa- per is not just an archival device for storing a completed research program; it is also a structure for planning your research in progress. If you clearly understand the pur- pose and form of a paper, it can be immensely useful to you in organizing and conducting your research. A good outline for the paper is also a good plan for the research program. You should write and rewrite these plans/outlines throughout the course of the research. At the beginning, you will have mostly plan; at the end, mostly outline. The continuous effort to understand, an- alyze, summarize, and reformulate hypotheses on paper will be immensely more efficient for you than a process in which you collect data and start to organize them only when their collection is 'complete' ." Here are some con- crete steps to get started.

1. Read George Whitesides' "How to Write a Paper".
2. Read through *at least* one full paper in your target journal, to get a sense of the content and writing style.
3. To clarify in your own head the purpose of your paper, start by drafting your abstract.
4. Before you tackle the body of the paper, sketch block outlines of the figures. Decide what images and plots you will put in the paper, and how the panels will be arranged.
5. Outline at the paragraph level before you write. Look at how many paragraphs there will be in the style of paper you are trying to write. For example, for a standard 4-page scientific letter, aim for 13 paragraphs (generally, you can estimate about 200 words per paragraph). Figure out how to tell your entire story (not numbers, just story!) in 13 stand-alone sentences.
6. Make each of those sentences into the first sentence of a paragraph, and fill into each paragraph only de- tails that are relevant to that first sentence. If you find yourself writing details about the figures, cut and paste them into the captions.
7. If you can include the minimal identifying information in parentheses to trigger your memory later, e.g. "(WhitesidesAdvMat)", so all of the information is compact.
8. Dig into the existing literature to write the intro paragraphs. A thorough literature search may take a full focused week for each intro paragraph. Use an organized, three-pass approach to keep a good balance between depth and breadth of your search.
9. Rewrite your abstract, taking into account what you have learned from the process of writing the paper. As you fine-tune your abstract, refer again to Nature's instructions for writing an abstract and for clear communication more generally.

Your paper should be fractal:

Somebody with one minute to look at it should be able to get the main idea just from reading the abstract. Somebody with 5 minutes should be able to look at the figures and get more out of it. Somebody with 10 minutes should be able to get the story from the introduction, first sentence of each paragraph, and conclusion.

LaTeX – A document preparation system

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents. LaTeX is available as free software.

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$T sample$	Tsample
$V rms$, V (rms)	Vrms
E_x, x direction	E_x, x direction
B app	B app
$Sb2Te3$, Sb2Te3	Sb2Te3
Sb2−x	Sb2−xVx Te3
VxTe	dI/dV

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3	
dI/dV	
$B = 5T$, B=5T	$B = 5\,T$
x direction, X	x direction
direction	1st, 2nd
1st, 1st, 2nd, 2nd	

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Comparison between blurry pixels (dishonest interpo- lation occurs when the image is processed in Microsoft Pow-erpoint) vs. clean pixels (honest representation is preserved when the image is processed in Python and Adobe Illustra- tor). MFM images of vortices in $NdFeAsO1-xFx$.

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2. Add tags: It's useful to add tags to help sort your imported papers. For example, if you are going to be writing a manuscript in 2019 on superconductivity, you might add the tag "sc19" to all the relevant papers that you will be citing in your manuscript.
3. Export bib file: Select all of the references that you want to include, and go to File Export. Name your file, and it will add a citation key to each paper (e.g. Whitesides2004) and automatically export to a bib file.
4. **Resolve redundant citation keys**: At this point, you may have several references with the same citation key, e.g. Huang2016a and Huang2016b For your future convenience, you should manually change the redundant citation keys to be more informative, e.g. HuangNanoLett2016 and HuangPRB2016. Now re export the bib file. Open the bib file in your tex file editor. By default, Mendeley exports all fields, including long ones like the abstract. To reduce clutter in your bib file, and make it easier to debug any errors, it's a good idea to remove the abstracts and other unnecessary fields. For exam- ple, in WinEdt go to Search Replace, check the reg- ular expressions box, search for "<abstract** ,>," and replace it with nothing.

Introduction to R

You've made it this far. In theory you know how to collect your data now. You might have done that by conducting interviews or running a survey, or just by visiting an archive like the General Social Survey website. *Having* data is worth something, but it's not worth everything. You have to do something with the data in order to answer any questions with it.

The rest of this book is focused on that goal - using the data you collected in order to answer the questions you want to be able to ask. A lot of the time we use statistics to

answer those questions, at least partially. Sometimes we'll use the basic calculations you probably did in a high school stats class and sometimes using something more complicated. Statistics is a substantial part of how social scientists know anything about the world. But this book wont focus on how to calculate a standard deviation by hand, because you don't have to. It's good for understanding what the measure means, but software can do that work for you lightning fast - the more important skill is knowing what to do with it once it is calculated.

The next set of chapters will all be structured the same way. The first half of the chapter will introduce a topic (in this chapter R and programming) and the second half will focus on examples and practice. You can read the first half without being concerned about the second half, and you can just go practice the second half if you already know everything you need to about the topic.

The second half of the chapter will generally repeat the material in two forms. I'll describe all the steps involved in whatever we're learning, and I'll walk you through those steps using videos too. That gives you a few opportunities to see the material. If you get stuck practicing it'll be frustrating. I still get frustrated pretty often when coding. What I would recommend is slowing down, looking back at what you did and just trying to reproduce exactly what is in the book as closely as possible.

9.1 Concepts

9.1.1 What is R

R is a programming language and environment for data analysis that is popular with researchers from many disciplines. R refers both to the computer program one runs, as well as the language one uses to alter data within the environment. R only speaks R, and so like traveling to a foreign country it is useful to learn the local language in order to communicate. You call yell at R in English as long as you want, but it can't produce your data unless you ask correctly. Fortunately, R's language is based on English and it wants to be as straightforward as possible

9.1.2 Why Use R?

There are other statistical packages that similar research methods classes use, including Stata and SPSS. One of the greatest benefits of R is the price: free. Access to Stata for a one semester class costs $45-125, and extended access costs more. And like Apple they update the software periodically, which means purchasing a new license. R is an open source software that anyone can use free of charge forever. That means whatever skills you learn you can continue to develop after the class ends.

Many people have access to Excel as a spreadsheet program through Microsoft Office, but R is faster and more flexible for data analysis. Excel is a drag-and-drop

program that does not produce reproducible analysis. R, as a programming language, allows users to create a 'script' that the computer runs in order to output analysis. That means the script can be reusable, shareable, and iterative, which will have significant benefits if you continue with data analysis after the class. Luckily, R is a relatively straightforward introduction to programming.

Me justifying that you should learn to code because it will benefit you after the class and you can write something called a script probably sounds weird though. The majority of readers wont be interested in doing anything related to this class after the semester, and you have no idea what a script or reproducible analysis is. Using Excel would be more user friendly - there would be no language to learn, and the data you're using is always right in front of you. I've done that before in a similar class, and actually using Excel as a tool is just as a difficult for beginners, and the ceiling on how useful it can be for working with data is considerably lower. Take this class as an opportunity and gentle introduction to a really valuable career skill: programming.

9.1.3 Why learn to program?

Data analytics is a quickly growing field with numerous job possibilities. The skills you learn in this class, if more fully developed, can be applicable to any industry, from Google to banks to government to a lemonade stand.

Computer programming is a flexible skill that can help you to manage laborious processes. It can stimulate creative thinking, grow your problem solving capabilities, and can help teach persistence. All of that with a valuable on the job market.

Data Scientist has been called the sexiest job of the 21st Century.

If you wont take my word for it, President Obama once stated that every kid should learn how to code/program.

Let's give it a shot in this class, and see if it's a skill you'd like to continue developing.

I'll make one final argument in favor of coding. It's a bit like doing magic of casting spells. You get to speak an arcane language that not everyone understands and when you do speak it things happen. If I write a statement like "a graph that shows the relationship between murder and assault rates for US states" the sentence does nothing. It just sits there, and you can read that sentence, but nothing happens. If I write a spell though like plot(USArrests$Murder, USArrests$Assault) suddenly it transforms into what I want.

5.

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REPORT ABOUT THE PROGRAMME

Dt: 07-03-2022

Title Of The Programme: One day Workshop on Research Paper Writing Using LaTeX tool

Inauguration Date & Venue: 6th March 2022 & DNRCET Seminar Hall

Organized By: Department Of Mechanical Engineering, DNRCET

Resource Person: Dr. Ramalingaswamy Cherukuru, Asst. Prof, NIT Warangal, Telangana.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan kumar

Prinicpal, D.N.R College Of Engineering & Technology

Number of Faculty Attended: 35
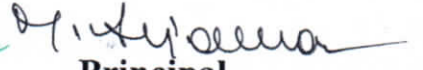
Concept:

Many researchers are using Microsoft Word for writing research papers. However, Microsoft Word has several problems or limitations. In this program, discussed about the use of LaTeX as an alternative to Microsoft Word for writing research papers.

LaTeX is a document preparation system, proposed in the 1980s. It is used to create documents such as research papers, books, or even slides for presentations. The key difference between LaTeX and software like Microsoft Word is that Microsoft Word let you directly edit your document and immediately see the result, while using LaTeX is a bit like programming. To write a research paper using LaTeX, you have to write a text file with the .tex extension using a formatting language to roughly indicate how your paper should look like. Then, you can run the LaTeX engine to generate a PDF file of your research paper.

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Balusumudi Bhimavaram – 534202
(Approved by AICTE, New Delhi & Affiliated to JNTUK, Kakinada)
(Accredited with B^{++} Grade by NAAC)
Ph: 08816-221238 Email: dnrcet@gmail.com website:
https://dnrcet.org

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2	T. Prasanthi	CE	T. Prasanth	T. Prasanth
3	M. Sorinu	EEE	M Sorinu	M. Sorinu
4	DR. J. Harish	ME	Dr. J	Dr. J
5	M. Pandu Ranga Rao	ME	M.P.G.Rao	M P&R
6	J. Kumar Basi	EEE		
7	P. Nagaraju	EEE	P. nag	P. nag
8	B. Subresh Kumar	ME	sure	Suny
9	M. Vijay Daniel	ME	M.V. Daniel	M. V. Daniel
10	N. Manleela	ECE	N. M	N. M
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12	U. Susmitha	ESE		
13	N. Bharathi	CSE	B	B
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20	B. KRISHNA PRASAD	MBA		
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22	A. Vasni Krishna	BSH		
23	ch. Renukadevi	BSH	R	R
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29	K. Siva Syamala	CSE		
30	D. Praveen Prakash	CSE		
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32	Moshe Galdu	BSH		
33	N. Bharathi	CSE		
34	Dr. S.G. Ratnam	BSH		
35	Mr. D.D.D. Suryba	CSE		

M. Arjankumar
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Dr. Ramalingaswamy Cheruku

Assistant Professor

Department of Computer Science And Engineering

National Institute of Technology, Warangal - 506004, Telangana, INDIA

: rmlswamy@nitw.ac.in : 9573827143

Interests: Soft Computing, Optimization, Deep Learning, ANNs, Machine Learning, Bio & nature inspired algorithms for WSNs, Data Mining, Fuzzy logic

Course Taught Previously

Computer Architecture

Algorithm Analysis and Design

Mathematical Foundation of Computer Science

Compiler Design

Database Management Systems

Publications

Journal Publications

1. Cheruku Ramalingaswamy, Damodar Reddy Edla, Venkatanareshbabu Kuppili, Dharavath Ramesh,"RST-BatMiner: A Fuzzy Rule Miner Integrating Rough Set Feature Selection and Bat Optimization for Detection of Diabetes Disease", **Applied Soft Computing Journal. (Elsevier, IF: 5.472, SCI Indexed)**

2. Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "SM-RuleMiner: Spider monkey based rule miner using novel fitness function for diabetes classification." **Computers in Biology and Medicine**, 81, 79-92, 2017. **(Elsevier, IF: 3.434, SCI Indexed)**.

3. Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "Diabetes Classification using Radial Basis Function Network by Combining Cluster Validity Index and BAT Optimization with Novel Fitness Function." International Journal of Computational Intelligence Systems, 10(1), 247-265, 2017. (Taylor & Francis IF: 2.00, SCI Indexed).

4. Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "An Optimized and Efficient Radial Basis Neural Network using Cluster Validity Index for Diabetes Classification", The International Arab Journal of Information Technology, (IAJIT, IF: 0.724, SCI Indexed).

5. Annushree Bablani, Damodar Reddy Edla, Diwakar T., Cheruku Ramalingaswamy, "Survey on Brain Computer Interface: An Emerging Computational Intelligence Paradigm", **ACM Copmputing Surveys, I.F. 5.55**

6. Damodar Reddy Edla, Amrutha Lipare, Cheruku Ramalingaswamy, Venkatanaresh-babu Kuppili, "An Efficient Load Balancing of Gateways using Improved Shuffled Frog Leaping Algorithm and Novel Fitness Function for WSNs", IEEE Sensors Journal, 17(20), 6724 - 6733, 2017. (IEEE, IF: 2.617, SCI Indexed).

7. Damodar Reddy Edla, Mahesh Chowdary Kongara, Cheruku Ramalingaswamy "SCE-PSO Based Clustering Approach for Gateways Load Balancing in Wireless Sensor Networks", Wireless Networks, (Springer, SCI, I.F. 1.981)

8. Damodar Reddy Edla, Amrutha Lipare, Cheruku Ramalingaswamy,"Shuffled Complex Evolution Approach for Load Balancing of Gateways in Wireless Sensor Networks", Wireless Personal Communications, 2017. (Springer, IF: 1.200, SCI Indexed)

9. Damodar Reddy Edla, Mahesh Chowdary Kongara, Cheruku Ramalingaswamy, "A PSO-based Routing using Novel Fitness Function for Improving Gateways Lifetime in WSNs", Wireless Personal Commuinications,((Springer, SCI, I.F. 1.200)

10. Damodar Reddy Edla, Diwakar Tripathi and Cheruku Ramalingaswamy, Venkatanareshbabu Kuppili, " An Efficient Ensemble Framework with BPSOGA-based Fearure Selection: A Casestudy on Credit Scoring Datasets ", Arabian Journal of Science and Engineering. (Springer, IF: 1.092, SCI Indexed)

11. Ashan Hussain, Keshavamurthy, Cheruku Ramalingaswamy, "Dynamic Multi-Layer Ensemble Classification Framework for Social Venues using Binary Particle Swarm Optimization", Wireless Personal Commuinications, (Springer, SCI Indexed, I.F. 1.200)

12. Diwakar Tripathi, Damodar Reddy Edla, Cheruku Ramalingaswamy, VNB "A Novel Hybrid Credit Scoring Model based on Ensemble Feature Selection and Multi-layer Ensemble Classification" Journal of Computational IntelLigence (Willey, SCI Indexed, I.F. 1.352)

13. B. Naresh kumar Reddy,Cheruku Ramalingaswamy, R. Nagulapalli, and Dharavath Ramesh, "A Novel 8T SRAM with Improved Cell Density" Journal of Analog Integrated Circuits and Signal Processing (Springer, SCI Indexed, I.F. 0.8)

14. Shubam Dhodla, Damodar Reddy Edla, Anushree Bublani, Cheruku Ramalingaswamy, VNB "Lie Detection using Extreme Learning Machine: A Concealed Information Test based on Short-Time Fourier Transform and Binary Bat Optimization using a Novel Fitness Function" Journal of Computational Intelligence (Willey, SCI Indexed, I.F. 1.352)

15. Diwakar Tripathi, Damodar Reddy Edla, Cheruku Ramalingaswamy, "Hybrid Credit Scoring Model Using Neighborhood Rough Set and Multi-layer Ensemble Classification" Journal of Intelligent and Fuzzy Systems, 2017, (IOS Press, SCI Indexed, I.F. 1.426)

16. Ramalingaswamy Cheruku and Damodar Reddy Edla, "Selector: PSO as Model Selector for Dual Stage Diabetes Network" in Journal of Intelligent Systems. (De-Gruter, ESCI, Scopus & DBLP Indexed)

Conference Publications

1. Cheruku Ramalingaswamy, Damodar Reddy Edla, Venkatanareshbabu Kuppili and Ramesh Dharavath. "PSO-RBFNN: A PSO-based Clustering Approach for RBFNN Design to Classify Disease Data", in 26 th International Conference on Artificial Neural Networks (ICANN), Italy, LNCS 10614, pp. 411-419, 2017.

2. Cheruku Ramalingaswamy et al. "A Bi-Level Cascaded Ensemble Framework for Effective Disease Diagnosis", in 31 st TENCON, 2019, India.

3. Cheruku Ramalingaswamy, Damodar Reddy Edla, and Venkatanareshbabu Kuppili. "Intelli-DRM: An Intelligent Computational Model for Forecasting Severity of Diabetes Mellitus" in 8 th International Conference on Computing Communication and Networking Technologies (ICCCNT), IEEE, IIT Delhi, 2017

4. Cheruku Ramalingaswamy , Damodar Reddy Edla and Venkatanareshbabu Kuppili, "Bin-BB: Binning with Branch & Bound feature selection for improved diabetes classication" in 14 th INDICON, IEEE, IIT Roorkee, India, 2017

5. Ramalingaswamy Cheruku, Diwakar Tripathi, Narasimha Reddy Y and Sathya Prakash Racharla "Review on RBFNN Design Approaches: A Case Study on

Diabetes Data" in 1 st International Conference Latest Advances in Machine learning and DAta Science, Springer, NIT Goa, India, 2017

6. Diwakar Tripathi, Ramalingaswamy Cheruku and Annushree Bablani"Relative Performance Analysis of Ensemble Frameworks and Dimenstionality Reduction Approaches for Credit Scoring Datasets" in 1 st International Conference Latest Advances in Machine learning and DAta Science, Springer, NIT Goa, India, 2017

7. Damodar Reddy Edla, Diwakar Tripathi, Venkata Naresh Babu and Ramalingaswamy Cheruku "Survey on Clustering Techniques" in ICICCT-2018, IEEE, India, 2018

8. Amrutha Lipare, Damodar Reddy Edla, Ramalingaswamy Cheruku, Diwakar Tripathi "GWO-GA based Load Balanced and Energy Efficient Clustering Approach for WSN" in SmartCom-2019, IEEE, Bangkok, 2019

9. Naresh Kumar reddy, Srangam,Veeraiha, Ramalingaswamy Cheruku, "SRAM cell with better read and write stability with minimum area", 31 st TENCON, 2019, India.

10. Damodar Reddy Edla , Vilas Deshmukh , Ramalingaswamy Cheruku Saheeka SD and Brijesh Yadav,"A Novel Green Stable Evolutionary Routing Algorithm for Energy Efficiency in WSNs" in 7 th International Conference on Advances in Computing, Communications and Informatics (ICACCI), IEEE, MIT Manipal, India, 2017.

11. Satyanarayana Nimmala, Ramadevi Y., Srinivas Naik, Ramalingaswamy Cheruku "Predicting High Blood Pressure using Decision Tree Based Algorithm" in 1 st International Conference Latest Advances in Machine learning and DAta Science, Springer, NIT Goa, India, 2017

12. G Kiran Kumar, Ilaiah Kavati, Koppula Srinivas Rao and Ramalingaswamy Cheruku "Spatial Co-location Pattern Mining using Delaunay Triangulation" in 1 st International Conference Latest Advances in Machine learning and DAta Science, Springer, NIT Goa, India, 2017

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Research Paper Writing Using LaTeX tool

You should start writing your paper *while* you are working on your experiment. Prof. George Whitesides says: "A pa- per is not just an archival device for storing a completed research program; it is also a structure for planning your research in progress. If you clearly understand the pur- pose and form of a paper, it can be immensely useful to you in organizing and conducting your research. A good outline for the paper is also a good plan for the research program. You should write and rewrite these plans/outlines throughout the course of the research. At the beginning, you will have mostly plan; at the end, mostly outline. The continuous effort to understand, an- alyze, summarize, and reformulate hypotheses on paper will be immensely more efficient for you than a process in which you collect data and start to organize them only when their collection is 'complete' ." Here are some con- crete steps to get started.

1. Read George Whitesides' "How to Write a Paper".
2. Read through *at least* one full paper in your target journal, to get a sense of the content and writing style.
3. To clarify in your own head the purpose of your paper, start by drafting your abstract.
4. Before you tackle the body of the paper, sketch block outlines of the figures. Decide what images and plots you will put in the paper, and how the panels will be arranged.
5. Outline at the paragraph level before you write. Look at how many paragraphs there will be in the style of paper you are trying to write. For example, for a standard 4-page scientific letter, aim for 13 paragraphs (generally, you can estimate about 200 words per paragraph). Figure out how to tell your entire story (not numbers, just story!) in 13 stand-alone sentences.
6. Make each of those sentences into the first sentence of a paragraph, and fill into each paragraph only de- tails that are relevant to that first sentence. If you find yourself writing details about the figures, cut and paste them into the captions.
7. If you can include the minimal identifying information in parentheses to trigger your memory later, e.g. "(WhitesidesAdvMat)", so all of the information is compact.
8. Dig into the existing literature to write the intro paragraphs. A thorough literature search may take a full focused week for each intro paragraph. Use an organized, three-pass approach to keep a good balance between depth and breadth of your search.
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Sb2−x	Sb2−xVxTe3
V$_x$Te	dI/dV

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Fig. 1 illusrates this point.

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   Note 1: Mendeley also allows you to import directly from a PDF file, and it tries to pull all of the meta- data from the PDF, but the process is imperfect. So it's safest to use the DOI for an error-free import.

   Note 2: Even if you use the DOI, some journal titles will not import correctly with special characters, so you may need to manually correct.

2. Add tags: It's useful to add tags to help sort your imported papers. For example, if you are going to be writing a manuscript in 2019 on superconductivity, you might add the tag "sc19" to all the relevant papers that you will be citing in your manuscript.

3. Export bib file: Select all of the references that you want to include, and go to File Export. Name your file, and it will add a citation key to each paper (e.g. Whitesides2004) and automatically export to a bib file.

4. **Resolve redundant citation keys:** At this point, you may have several references with the same citation key, e.g. Huang2016a and Huang2016b For your future convenience, you should manually change the redundant citation keys to be more informative, e.g. HuangNanoLett2016 and HuangPRB2016. Now re export the bib file. Open the bib file in your tex file editor. By default, Mendeley exports all fields, including long ones like the abstract. To reduce clutter in your bib file, and make it easier to debug any errors, it's a good idea to remove the abstracts and other unnecessary fields. For exam- ple, in WinEdt go to Search Replace, check the reg- ular expressions box, search for "<abstract** ,>," and replace it with nothing.

REPORT ABOUT THE PROGRAMME

Dt: 23-05-2022

Title Of The Programme: A Workshop on Drafting Using Tekla

Inauguration Date & Venue: 22nd May 2022 & DNRCET Seminar Hall

Organized By: Department Of Civil Engineering, DNRCET

Resource Person: V. Bhaskara Rao, Designlabs, Autodesk Authorised Academic Partner, Hyderabad.

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College Of Engineering & Technology

Number of Faculty Attended: 38
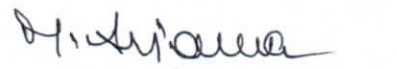
Concept:

Tekla Structures is a building information modeling software able to model structures that incorporate different kinds of building materials, including steel, concrete, timber and glass. Tekla allows structural drafters and engineers to design a building structure and its components using 3D modeling, generate 2D drawings and access building information.

Tekla Structures Features

- 2D Drawing.
- 3D Imaging.
- BIM Modeling.
- CAD Tools.
- CRM.
- Collaboration Tools.
- Commercial.
- Contact Management.

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(Accredited with B++ Grade by NAAC)

Ph: 08816-221238 Email: dnrcet@gmail.com website:
https://dnrcet.org

A workshop on drafting using Tekla by V. Bhaskara Rao, Designlabs,Autodesk Authorised Academic Partner, Hyderabad 22nd May 2022

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 22/05/22	
			FN	AN
1	N S V L Sowjanya	ECE	N.S.V.L(Sd)	N.S.V.L(Sd)
2	Veera valli balaji	ECE	V. Balaji	V. Balaji
3	E. Ramalakshmi	CSE	B.	B.
4	G.V. SATYA SRIRAM	CSE	Saw.	Raw.
5	MR. DDD SURIBABU	CSE		
6	K VENKATA CHANDRAN	CSE		
7	BONTHU SRIDEVI	ECE		
8	J keerthana	CE	Keethan	Keethan
9	M. Lakshmi Kumar	CE	M. Kumar	M. Kumar
10	Dr. H. Anjan kumar	CE		
11	Mamme srinu	EEE	M. Srinu	H. Srinu
12	Joseph Kiran Rai	EEE		
13	J. Harish	ME		
14	T. PRASANTH	CE	Prasanth	Prasanth
15	M. P. R. Ram	ME	Ru	R
16	P. Anjaneyulu JD	CE		
17	G. V. satya soniRam	CSE		
18	M. Naga lakshmi	CSE	La	Nk
19	B teswani	ECE		
20	P. Nagaraju	EEE	Nagaraju	Nagaraju
21	CH. Renukadevi	BSH		
22	P. Narasimha Raju	BSH		
23	Dr. Gu. Jagapathi Rao	MBA		
24	M. venkata krishna	CE	H. Krishna	H. Krishna
25	V.R.E.S. Kumari	MBA		
26	DR. IPPili Harish	ME	Harish	Harish
27	P. Narasimha Raju	BSH	PR	PR

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28	M. Srinnu	SREEE	8o	9u
29	M. Thambi Babu	ME	JB	JB
30	B. SHALEM	ME	So	So
31	Sekhar Babu huom	ECE	Sus	Sus
32	D.D.D SimBu	CSE	Bo	B
33	B. Vamsidhar	MBA	yo	yo
34	S.V. N.N.Ru.	MBA	Ru	Ru
35	Mashe S	BSH	Ao	Ao
36	G. V.Jayapathi	MBA	So	So
37	B. venkatapatife	BSH	yo	yo
38	K chandramoul.	MBA	du	du

PRINCIPAL

PROFILE

Dr. M C S MADAN

Ph.D. in Environmental Engineering and Managementspecialization.
Dr M Chandra Shekhar Madan has been with us for the last 15 years,and he is responsible for the College Academic Committee. He hasprepared courses for the Civil Engineering department, such as Environmental Engineering I & II and Waste Water Management, along with handling courses like Industrial Waste and Waste Water Management, Air Pollution Control, Solid Waste and Hazardous Waste Management, Engineering Geology.

In his 25+ years of experience, he has deployed different teachingmethodologies such as the traditional White Board & Marker, PowerPoint Presentations, Demonstration based lectures, textbook Assignments, Web References, Video Lectures, Enquire oriented Education, Interactive Learning and Group Discussion.

He is a member of the ISTE professional body, and has published research journals and papers on :

- Effect of Structural Irregularity in Multistoried Effect of Carbon Fibre Reinforced Polymer (CFRP) sticking on Load Carrying Capacity of Columns

- Effect of basalt Fibre reinforced Polymer (BFRP) sticking on LoadCarrying Capacity of Columns

- Enhancement and partial Replacement of Cement by Glass Powder based on Concrete

- Utilization of Demolished Concrete Waste for New Construction

He has also mentored and guided research committees on thefollowing projects:

- A Study on drinking Water Quality and Security in Amalapuram Municipality

- A Study on Municipal Solid Waste (MCW) designing of Sanitary Land Filling (SLF) site and management of MSW in Amalapuram

- A Study on Effect of Sea Food Processing Effluent in Coringi River

- A Study about Effects on Compressive Strength of Concrete by Partially Replacing Concrete with Marble Dust Powder and Using Polycarboxylate Ethane as Super Plasticizer

- A Study on Shrimp Processing Industry effluent waste and utilisation of treated waste in East Godavari District, Andhra Pradesh

- A Study on Disposal of Untreated Sewage for Land treatmentin Amalapuram

- A Study on Use of Rice Husk Ash in Concrete

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He has received the following recognitions and awards by theUniversity:

- Lab External for Environmental Engineering

- E Waste management (NPTEL)

- Paper Evaluation of Environmental Engineering course (JNTUK)

- Paper Evaluation of IWHWM course (JNTUK)

- Paper Evaluation of APC course (JNTUK)

- Paper Evaluation of WWM course (JNTUK)

- Lab External Examiner for EE (JNTUK)

- Project External for viva voce for B.Tech & M.Tech

- Lab External for UG & PG courses (JNTUK)

- Preparation for Scheme of Evaluation for UG subjects (JNTUK)
- Chief Examiner for UG subjects (JNTU)

He has been a vital part in organizing Seminars and Workshops on E Waste Management, Auto CAD 2D, Internship Program Restructuring, ARC GIS amongst a few.

In his previous stint, he was an Assistant Professor at Aditya College (2005-2007) & Founder HoD and Associate Professor at SGCSR College (1994-2005)

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Tekla MATERIAL

Tekla Structures uses ASCII and binary files to manage profile, material, reinforcement, bolt and bolt assembly catalogs.

Each environment has its own folder, where the files related to different catalogs are stored. For example, ..\environments\uk\general\profil\ contains the files for managing catalog files used in the United Kingdom. The exact file location may vary depending on the folder structure of your environment files.

The following table lists files and file types related to catalogs.

File name	Used for	Located in
profitab.inp	Defines the names that you can use for parametric profiles.	the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
rebar_database.inp	The rebar catalog.	the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
mesh_database.inp	The reinforcement mesh catalog.	the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
You can define the file name while exporting.	Created when you export rebar catalogs.	You can define the folder where to export the files.
matexp_<software>.cnv	Contains information to convert material names when transferring model information using links. For example, converts S235JR to E360B for DSTV.	the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
prfexp_<software>.cnv	Contains information to convert profile names when transferring model information using links. For example, converts HEA100 t	the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\

File example name	Used for	Located in
	E100A for DSTV	
.clb for example, RU_CF.clb	Contains the definitions of parametric profiles used profitab.in	..\ProgramData\Trimble\Tekla Structures\<version>\environment\common\inp
.lis You can define the file name while exporting.	Created when you export bolt, profile and material catalogs.	You can define the folder where to export the files.
dbssdb.db	The bolt assembly catalog.	In the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
screwdb.db	The bolt catalog.	In the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
profdb.bin	The profile catalog.	In the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\
matdb.bin	The material catalog	In the \profil folder, under the environment folders, ..\ProgramData\Trimble\Tekla Structures\<version>\environment\<environment>\

REPORT ABOUT THE PROGRAMME

Dt: 11-10-2021

Title of the Programme: One Day Workshop on "Entrepreneurship and Startup for Beginners" by Dr. D.J Nagendra Kumar

Inauguration Date & Venue: 10th Oct 2021 & DNRCET Seminar Hall

Organized By: Department of Computer Science & Engineering, DNRCET

Resource Person: Dr. D. J Nagendra Kumar, Professor & Head, Dept of IT, Vishnu Engg College, Bhimavaram

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar
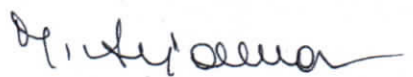
Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 31

Concept:

Entrepreneurship is the art of starting a business, basically a startup company offering creative product, process or service. We can say that it is an activity full of creativity. An entrepreneur perceives everything as a chance and displays bias in taking decision to exploit the chance. While entrepreneurship refers to all new businesses, including self-employment and businesses that never intend to become registered, startups refer to new businesses that intend to grow large beyond the solo founder.

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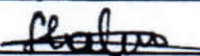
(Accredited with B++ Grade by NAAC)
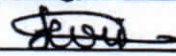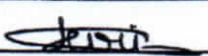
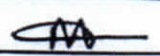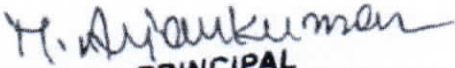Ph: 08816-221238 Email: dnrcet@gmail.com website: https://dnrcet.org

One Day Workshop on "Entrepreneurship and Startup for Beginners" by Dr.G.Nagendra 10th Oct 2021

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 10/10/21	
			FN	AN
1	Dr. Ippili Harisha	ME	Ab	Ab
2	P. Nagaraju	EEE	Ab	Ab
3	M. SRINIVU	EEE	Srinu	Srinu
4	T. Prasanti	CE	B	B
5	G. SAI BABU	EEE	SB	SB
6	T. V. Krishna	CE	V.b	V.b
7	B. vamsidhar	BSH	H	VH
8	D. Praveen parakash	CSE	PP	PD
9	T. Raja Rajeswari	CSE	P.Raj	P.Rajesu
10	K. Siva Syamala	CSE	SS	SS
11	Dr. G. G. Ratnam	BSH	Ratnu	Ratnu
12	V.R.E.S.Sivu	MBA	Ku	Ku
13	N.V.S.L.Sowjaya	ECE	J	J
14	Dr.A.P.Ramesh	ECE	APP	APP
15	m.ois. Naga Lakshmi	CSE	N	A
16	U.Susmitha	CSE	S	S
17	N.Bharathi	CSE	B	B
18	K.STVA SYAMALA	CSE	SS	SS
19	K.V.S.Spreesha.	BSH	Liveesh	Liveesh
20	N.Bharathi	CSE	B	B
21	K.V.S.N.Sodepmarya	MBA	AMS	AMS
22	Dr. G.V.Jagapathirao	MBA	J	J
23	CH.Renuka Devi	BSH	RD	RD
24	K.Chandramouliraju	MBA	Ch	Ch
25	G.MOSHE	BSH	Gus	Gus
26	D.Praveen parakash	CSE	P	P
27	K.Rajarajeswari	CSE	KR	KR

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28	B. Suresh kumar	ME		
29	B. SHALEM	ME		
30	G. Suri Babu	ECE		
31	N. marujleem	ECE		

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PROFILE

Dr.D.J.NAGENDRA KUMAR

Professor & Head

CURRENT POSITION:

Dean, Statutory Affairs

Professor&Head,

Department of Information Technology

EDUCATION:

Ph.D.   from   JNTUH,

M.Tech from   ANDHRA UNIVERSITY

MCA   from   ANDHRA UNIVERSITY

RESEARCH INTEREST:

- Data Mining

- Machine Learning, Genetic Programming

Present Working in Vishnu engineering college bhimavaram

Bhimavaram

One Day Workshop on "Entrepreneurship andStartup for Beginners" by Dr.D. J. Nagendra Kumar

The Entrepreneurship in the Raw Materials Sector proceeding is a collection of papers focusing on the macroeconomic aspects of green growth, the business opportunities in the raw materials sector, and the challenges in entrepreneurship, entrepreneurship training. These papers were presented during the closing conference of LIMBRA ('Decreasing the negative outcomes of brain drain in the raw materials sector'), a project funded by EIT Raw Materials in the period of 2019-2021. LIMBRA primarily aims at generating new entrepreneurial ideas in the raw materials sector, and to encourage engineering students graduating in raw materials-related programmes to start their own businesses. This proceeding offers a good summary of our approach, and our results: identify the critical trends in the macroeconomic environment; learn about the specifics of the raw materials markets; develop new business ideas, and rely on your local ecosystem for extra knowledge, mentoring; and finally, help students to "Become stay-at- home entrepreneurs".

Every company needs "literature," printed pieces that do a careful and well thought-out job of presenting its products and services: catalogs, newsletters, product sheets and brochures, letterhead, business cards, presentation folders, specification sheets, case histories or application sheets, special event brochures, annual reports, manuals, technical bulletins, posters, product insert sheets, labeling, recruitment materials and so on.

With the increased availability of powerful desktop publishing systems and software, many companies decide to meet these needs internally. Resist this impulse. Your homegrown materials will betray their off-the-cuff origin to most of the people who read them. Appearance is reality in marketing, and you have to look as professional as you are. And no matter how creative you are, a commercial copywriter or graphic designer can vastly improve almost any materials created by an entrepreneur.

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Here are some tips in dealing with the literature needs you'll face asyour company expands and grows:

Get a logo and stationery package designed professionally. Do this, and don't change it for at least 10 years. Either hire an advertising agency to create it or a design studio/graphic artist. Don't try this yourself, no matter how artistic you consider yourself. A professional artist will make sure your stationery materials reflect your corporate personality, while maintaining a clean and professional look. They will look good in color and in black and white; they'll reproduce well in smaller sizes; they'll fax clearly; and they'll simply be more attractive than what you can expect to do yourself.

Learn the principles of solid graphic design. Understanding graphic design is a lifetime's work, of course, but some reading and a sensitive eye can teach you a lot. Get hold of some graphic designbooks at a local bookstore and educate yourself. All your printed materials should follow fundamental design principles:

- Keep the look clean and simple. Don't overload the reader visually. Use a graphic grid to align the different elements in an orderly fashion.

- Use heads and subheads to lead the reader. When the reader turns the page, where will he or she look? Use heads and subheads to provide scanning points to keep the reader moving along.

- Avoid too much type. Pages filled with writing are not appealing to the reader. Break up the copy with photos, illustrations, cartoons, charts and so on.

- Use white space. Avoid a crowded look, despite the temptation to make use of every inch of paper you are paying for. White space serves as a visual frame for the rest of the content on the page.

- Stay with standard formats unless you have a good reason not to.All of us have grown accustomed to the standard 8-1/2" x 11"

format for print materials. Even our filing systems are made for things that size. If you go with an unusual size, your pieces may not lend themselves to being filed easily for reference.

- Put a caption with each photo. We all want to know what we are looking at. And a caption gives you the chance not just to identify your product but to remind the reader of the benefit.

- Use charts and graphs rather than tables. A brochure is a visual document. Use graphics to boost visual interest and make numbers meaningful.

Be sure your materials have a "family look." Every piece of literature doesn't have to look identical, but they should all look planned as a compatible unit. Imagine your literature laid out in front of you on a conference table. Does it all look like it comesfrom the same company? It should.

Invest in good photography. Small companies sometimes scrimp on getting good photos of their equipment, their job sites, their equipment in use or their accessories and supplies. Strong, professionally done photography will set you apart from other smallcompanies. Your customers want to be reassured of the quality of your product. Amateur snapshots give a very damaging impression of your professionalism. Good photography is an investment in yourfuture.

Appoint one person as lit boss. Your literature needs will be ever changing, with trade shows, with new products and markets and with normal growth. You must have one person responsible for anticipating future needs, handling literature production and maintaining inventory. Untended literature grows increasingly less useful and more frustrating. Every new piece should have a written rationale, audience description and content outline, not unlike the

rationale you develop for a piece of advertising copy.

M. Arjankuman

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REPORT ABOUT THE PROGRAMME

Dt: 08-01-2022

Title of the Programme: A One day seminar on "Convert idea to business: A pathway to success "

Inauguration Date & Venue: 7ᵗʰ Jan 2022 & DNRCET Seminar Hall

Organized By: Department of MBA, DNRCET

Resource Person: Dr. M C S MADAN , Ph.D. in Environmental Engineering and Management specialization

Chief Guest: Sri G. Satyanarayana Raju (Babu)

Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar

Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 29

Concept:

The session started with Mr. Madan giving thought provoking session which made students interested for taking entrepreneurship as their carrier option. He not only motivates the audience but also gave insight to the basics of entrepreneurship. Students were encouraged and had several practical doubts cleared during his session.

Chandra. Mouli
Coordinator

M. Arjankumar
Principal

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M. Arjankumar
PRINCIPAL
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(Accredited with B++ Grade by NAAC)

Ph: 08816-221238 Email: dnrcet@gmail.com website:
https://dnrcet.org

A One day seminar on "Convert idea to business: A pathway to success"

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	Date 07-01-2022	
			FN	AN
1	KVS SIRISHA	BSH		
2	Mrs. U. Sushmitha	CSE		
3	Dr. G.V Raju	MECH		
4	D. praveen	CSE		
5	Dr. K. Rajesh	MECH		
6	MOSHE GEDELA	BSH		
7	N.K.V.S. Shirisha	BSH		
8	T.S. chakravarthi	BSH		
9	Dr. M. Vasantha	BSH		
10	Dr. A. Ranganathan	CE		
11	S. Rajesh	EEE		
12	Dr. N. Venkat Rao	ECE		
13	CH. Renuka devi	BSH		
14	E. Rama Laxmi	CSE		
15	B. Nandan kumar	CSE		
16	Dr. A. Padrabham	BSH		
17	V. sridevi	ECE		
18	K.V. chandran	CSE		

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19	M. Nagalaxmi	CSE	Nagu	Nagu
20	.DDP VARMA	BSH	Varma	Varma
21	K. Rajarajeswari	CSE	Raju	Raju
22	C.V.Satyasairam	CSE	Satyes	Satyes
23	V. Bhavaniduga	ECE	Bhavani	Bhavani
24	K.V.S. Satyanarayana	BSH	Saty	Saty
25	M. Venkata krishna	CE	venkat	venka
26	S. Swathi	GCE	Swa	Swa
27	M. Srinu	EEE	srinu	srinu
28	J. Keerthana.	CE	Keerthi	Keerthi
29	A. Vamsi krishna	BSH	Vamsi	Vamsi

Chandra Mouli
COORDINATOR

PRINCIPAL

M. Arjankumar
PRINCIPAL
D.N.R. College of Engg. & Tech.
BHIMAVARAM-534 202.

M. Arjankumar
PRINCIPAL
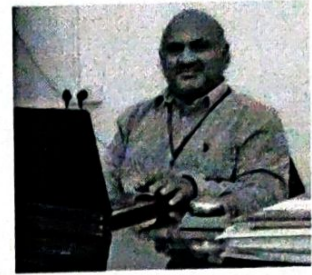D.N.R.College of Engg. & Tech.
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RESUME

Dr. M C S MADAN

Ph.D. in Environmental Engineering and Management specialization.

Dr M Chandra Shekhar Madan has been with us for the last 15 years, and he is responsible for the College Academic Committee. He has prepared courses for the Civil Engineering department, such as Environmental Engineering I & II and Waste Water Management, along with handling courses like Industrial Waste and Waste Water Management, Air Pollution Control, Solid Waste and Hazardous Waste Management, Engineering Geology.

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2. Effect of basalt Fibre reinforced Polymer (BFRP) sticking on Load Carrying Capacity of Columns

3. Enhancement and partial Replacement of Cement by Glass Powder based on Concrete

4. Utilization of Demolished Concrete Waste for New Construction

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2. A Study on Municipal Solid Waste (MCW) designing of Sanitary Land Filling (SLF) site and management of MSW in Amalapuram

3. A Study on Effect of Sea Food Processing Effluent in Coringi River

4. A Study about Effects on Compressive Strength of Concrete by Partially Replacing Concrete with Marble Dust Powder and Using Polycarboxylate Ethane as Super Plasticizer

5. A Study on Shrimp Processing Industry effluent waste and utilisation of treated waste in East Godavari District, Andhra Pradesh

6. A Study on Disposal of Untreated Sewage for Land treatment in Amalapuram

7. A Study on Use of Rice Husk Ash in Concrete

He has received the following recognitions and awards by the University:

1. Lab External for Environmental Engineering

2. E Waste management (NPTEL)

3. Paper Evaluation of Environmental Engineering course (JNTUK)

4. Paper Evaluation of IWHWM course (JNTUK)

5. Paper Evaluation of APC course (JNTUK)

6. Paper Evaluation of WWM course (JNTUK)

7. Lab External Examiner for EE (JNTUK)

8. Project External for viva voce for B.Tech & M.Tech

9. Lab External for UG & PG courses (JNTUK)

10. Preparation for Scheme of Evaluation for UG subjects (JNTUK)

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11.   Chief Examiner for UG subjects (JNTU)

He has been a vital part in organizing Seminars and Workshops on E Waste Management, AutoCAD 2D, Internship Program Restructuring, ARC GIS amongst a few.

In his previous stint, he was an Assistant Professor at Aditya College (2005-2007) & Founder HoD and Associate Professor at SGCSR College (1994-2005)

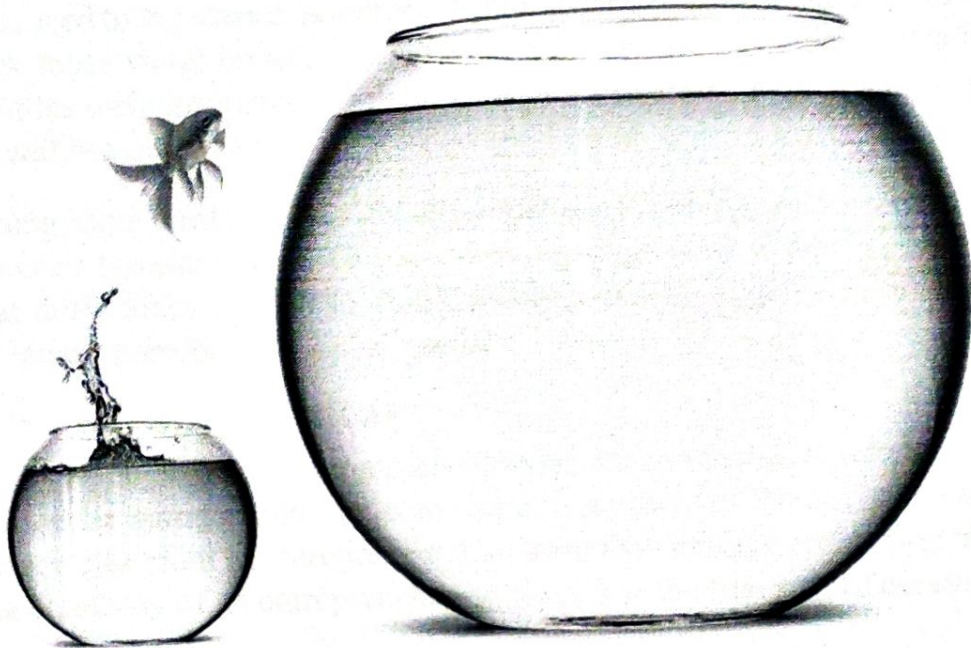# 7 Business ideas and opportunities

This chapter discusses the following facts

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7.1 Selecting a business idea

All the products, services, processes and techniques of today's world are the solutions offered to problems faced by mankind. They all are results of business ideas.

Think of the need for drinking water. Lack of sufficient drinking water supply is a common issue faced by many schools. Hence bottles of different sizes and shapes have been introduced to the market in order to bring water from homes. Since it was difficult to pack those water bottles in school bags due to their circular surfaces, cube shaped bottles were introduced to the market. As a result water bottles which can be carried without difficulties with books were created.

In this way, using their thinking towards the problems faced by people, creative individuals generate business ideas. Through observing the environment, it can be recognized that those ideas convert to viable businesses which produce different alternatives to satisfy personal and social needs.

The concept of business ideas

A business idea is a thought having a commercial value which satisfies the needs and wants of people while being a solution to an existing problem in the environment. Business ideas are important in entrepreneurship since they emerge combining the interest and the creativity of an entrepreneur and since it is the first step of creating a business.

"A dozen of ideas can be bought for ten cents" is a common saying in the field of business. This implies that there are ample business ideas. Yet all of these ideas are not converted to a business opportunity. It is the role of the entrepreneur to transform the ideas in to a business opportunity.

Characteristics of a good business idea

* Ability to developed as a business
* Ability to satisfy the needs emerge in the environment
* Ability to respond to the changing needs and wants
* Ability to successfully face the competition
* Should match with the technology
* Ability to reduce the risk
* Generate an adequate earning after converting to a business
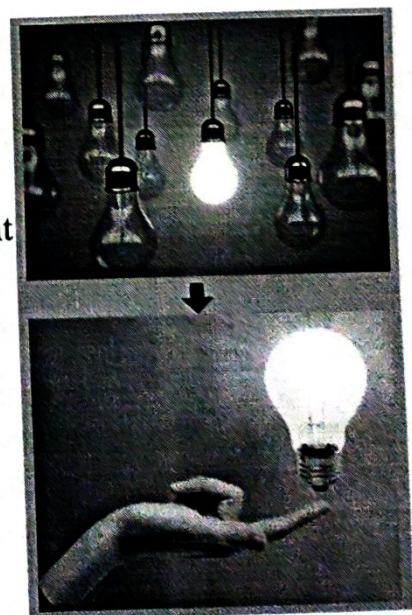* Ability to protect the business idea

Figure 7.1

Sometimes the entrepreneur has to consider hundreds of business ideas to select the most suitable idea. There are many sources through which the business ideas can be generated. Let's discuss them.

Sources of new business ideas

01. Conversion of hobbies and interests
02. Through individual capabilities and experience
03. Through market surveys
04. Through consumer reactions and complaints
05. Through creative thinking ability
06. Through mass media
07. Relating to suppliers
08. By studying the competition
09. Through educational programmes
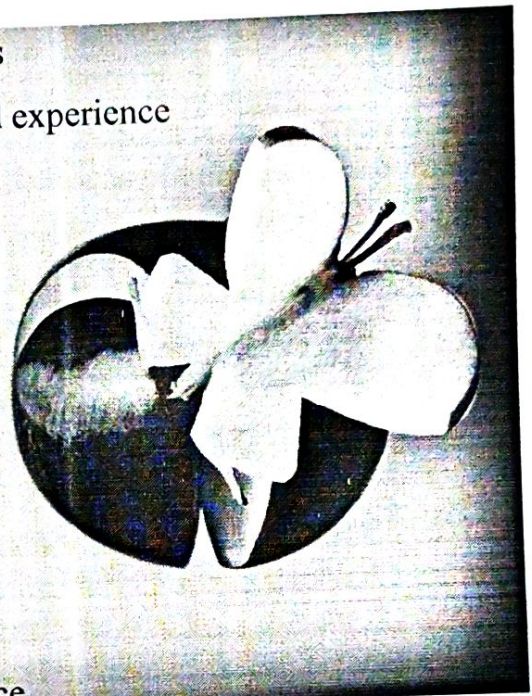10. Through exhibitions and experience

Figure 7.2

The sources of business ideas given in the above figure are further discussed below.

01. Conversion of hobbies and interests in to a business idea

People have different hobbies. There are a large number of entrepreneurs who have turned the hobbies like gardening, painting, breeding ornamental fish and photography to their business.

02. Emergence of business ideas through individual capabilities and experience

Businesses begin through the experience and practice obtained from the job and utilizing personal capabilities like dancing, singing and sports.

03. Emergence of business ideas through market surveys

Market surveys are carried out by an entrepreneur or other institutions in order to get the ideas of consumers regarding a product or a service. Business ideas are generated through the consumer needs, wants and responses revealed through such surveys.

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Example :-
> A bank providing their service at night and on public holidays based on the need of customers.

04. Emergence of business ideas through consumer responses

Business ideas can be generated through an investigation carried out by an entrepreneur or other institutions relating to the consumer needs, wants and responses. It is common to use suggestion boxes and consumer note books to get the ideas of consumers today.

Example :-
> Changing the recipes according to the ideas of consumers.

05. Emergence of business ideas through creative thinking abilities

Through the individual creative capability, new ideas are given to change an existing thing or a process.

Example :-
> Producing an equipment which can transform water vapour to drinking water

06. Emergence of business ideas through mass media

Business ideas can be generated through the information and news provided by mass media. There are ample advertisements available in the internet and daily or week-end news papers through which business ideas can be identified.

Example :-
> Asking stationery suppliers
> Advertisements to offer products in wholesale
> Advertisements asking partners to a business

07. Emergence of business ideas through suppliers

A business which is currently operating can generate business ideas from the ideas of its suppliers and other institutions linked with the business.

Example :-
> Introduction of new cultivation methods, seeds and fertilizers to those who are engaged in plantation by the institutions whom supplying agricultural equipments.

08. Emergence of business ideas through studying the competition

Business ideas can be generated through a study of the operations of competitors.

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Example :-
> Banks offering new services to the market to match the services of other competitors. When one bank introduces an account to the retired people other banks imitate that.

09. **Emergence of business ideas through educational programmes**
From the knowledge acquired through programs an individual follows, business ideas can be generated.

Example :-
> There are individuals who start business from the knowledge and experience gained through the programmes conducted by technical colleges and universities.

10. **Emergence of business ideas through exhibitions and experience**
Entrepreneurs generate business ideas by participating to the exhibitions organized by chambers of commerce.

Example :-
> Exhibitions of entrepreneurial products
> Competitions of innovators

Activity 01

Entrepreneur should generate business ideas through the changes that happen in the environment and should evaluate the feasibility of each idea. Following table explains how ideas are generated relating to an incident and their feasibility.

Incident: "sale of milk powder is prohibited" – a news

Business idea	Feasibility
★ Opening a centre for breeding cattle	Farmers opt for cattle farming due to the increase in future demand for fresh milk. As a result they tend to breed animals of different categories which give a higher yield.
★ Setting up a mobile unit to sell fresh milk	People tend to buy fresh milk from mobile units since fresh milk is available only in few places

You are required to generate business ideas identifying the changes like above in the environment. Give the feasibility/ suitability of each idea.

7.2 Conversion of business ideas in to business opportunities

Creation of a successful business will not happen instantly. It has a long way. This section explains the selection of a suitable/feasible business opportunity among the thousands of business ideas.

Business opportunity

An attractive investment idea which can provide an adequate return to the risk taker can be identified as a business opportunity. Further that idea should be a product or a service which satisfy consumer needs and wants while creating a value for them.

Whatever the number of business ideas available, it is the role of the entrepreneur to select the best idea and transform it to a business opportunity.

Difference between a business idea and a business opportunity

Already you have studied about the business ideas and business opportunities. You are aware that every business ideas will not become a viable business opportunity. Differences between these two concepts are identified below.

Business idea	Business opportunity
Business ideas are many. A large number of business ideas can be generated through different sources	Business opportunities are not ample. Only few business opportunities can be selected from hundreds of business ideas.
Business ideas are open. Many perceive them.	Everyone cannot recognize business opportunities among business ideas.
Every business idea cannot be implemented practically.	Business opportunities are practical.

Characteristics of a good business opportunity

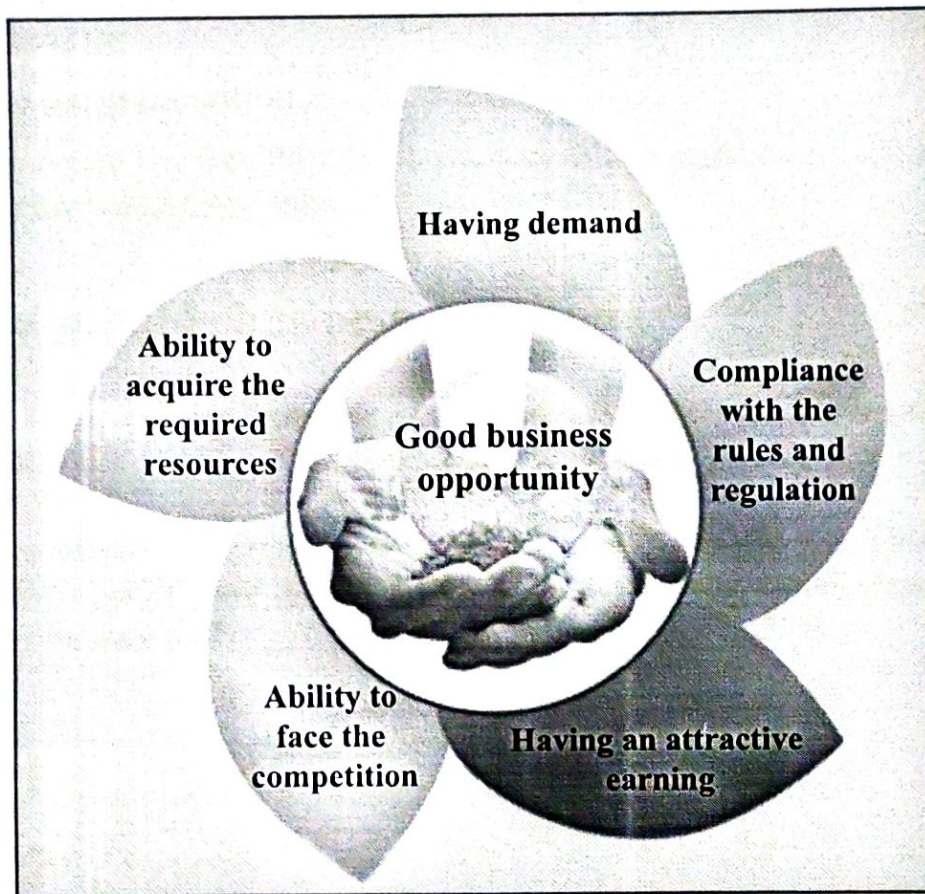
Figure 7.3- Characteristics of a good business opportunity

Ability to acquire the required resources

It should be possible to easily acquire the raw materials, labor, machineries and other infrastructure facilities.

Having demand

The product or service offered should have sufficient sales. That is there should be a considerable number of consumers.

Comply with the rules and regulations

The business opportunity should not violate the legal conditions relating to environmental protection, consumer protection, employees, tax principles etc. Further though some factors are not covered by rules and regulations, they should comply with the social interest, fairness and values.

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Having an attractive earning

The entrepreneur should be capable of getting a sufficient return for the money invested in the business by implementing the business opportunity .

Ability to face the competition

Possibility to successfully face the other businesses in the market who are engaged in similar businesses should be there.

Selecting a suitable business opportunity

In order to select a suitable business opportunity, the business ideas generated should be evaluated.

Selecting a good business idea can be presented as a three-step process. This can be identified as macro, micro and SWOT analysis. The following funnel -framework can be used to illustrate that.
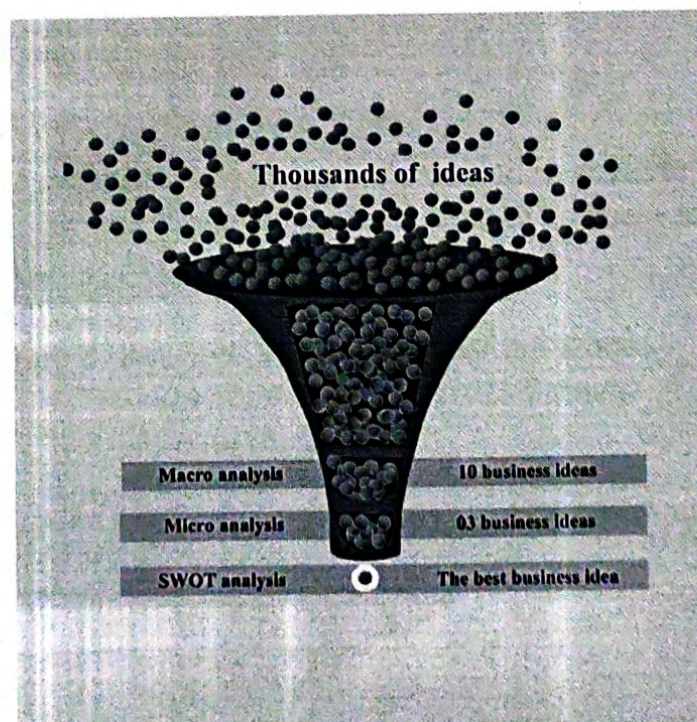

Figure 7.4- selecting a suitable business opportunity

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Step 01

Macro analysis

Macro analysis refers to the selection of at least 10 suitable better business ideas among the thousands of generated ideas considering the below mentioned factors in surface relating to each idea.

* Can the product be marketed?
* Are there enough resources?
* Does it match with the abilities and interests of the entrepreneur
* Is there anyone to get the support?
* Are there legal barriers?
* Can the required capital be found?
* Is there the ability to face competitors?

Activity 02

Try to generate ideas for which can be identified as suitable for starting a business. Focusing on following areas, generate at least 20 business ideas

Examples :-
* Solving the garbage issue of the school
* Providing organic fertilizer to farmers
* Distribute fresh milk

Considering the factors under macro analysis, select minimum of 10 ideas out of them.

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Step 02

Micro analysis

This analysis should be done for each of the ideas selected under step 01. Under micro analysis three most suitable business ideas out of the 10 identified above are selected considering the effect of following criteria on each of the business ideas. Here, the factors considered under first step are studied in detail.

Criteria which can be used for micro analysis

Having a market

This considers whether there are enough customers when the product is offered to the market or whether there is adequate sale to earn the required return to survive in the business. Moreover the ability to expand the business in the future should be considered.

Ease of finding raw materials

Under this the ease of finding quality raw materials under the lowest possible cost to engage in continuous production is considered. If it is difficult, this will lead to a break down in the production process.

Ability to find the required capital

Some business ideas require a substantial initial capital in order to transform them to business opportunities. The possibility of finding adequate capital under a minimum cost should be considered.

Government rules and regulations, principles and incentives

Even though very profitable, there are certain government rules and policies which influence some business fields. Some of them are environmental rules, employee regulations, consumer protection rules, import-export policies and tax policies. The extent to which these factors are favourable relating to the expected business idea and the government incentives like infrastructure facilities, tax reliefs and loan schemes should also be considered.

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Nature of the competition

The entrepreneur should be attentive of the other individuals and the organizations who offer a same or a substitute product to the product of the entrepreneur, their strengths and strategies as well as the potential competitors who may enter the market in the future.

Knowledge, experience, skills and interests of the entrepreneur

The basic knowledge, experience and the interest of the entrepreneur are critical for the implementation of the business idea under consideration. This makes the management of business operations easy. Further this factor is important in order to make decisions of the business and to ensure continual commitment.

Ability to find labour

The availability of skilled and unskilled labour, the cost of recruitment, selection and training, the ability to pay salaries and wages relating to the business idea should be considered.

Risk

It is important to carry out a study regarding the possibility of the business being unsuccessful due to earning losses.

Ease of initiation

Here the availability of other barriers to initiate the business and the possibility of easily initiating the business with minimum resources should be considered.

For micro analysis other criteria which seem suitable can also be used apart from the above mentioned ones. The entrepreneur will be able to select the most suitable business opportunity by evaluating the business ideas under more criteria.

It is important to assess the favourableness or the unfavourableness of the business ideas considered under different criteria. Then it can be entered to a point- scale as follows and the business ideas can be evaluated through that point-scale using a table as given below.

Guide lines for the use of point scale	
Example :- **Let's evaluate the factor of providing raw materials**	
Criteria	**Points**
If it can be supplied from close proximity without any cost	5 points
If it can be purchased from close proximity	4 points
If it can be purchased from town and can be transported	3 points
If it has to be imported	2 points
If there are too many legal barriers	1 points

As such the following common point scale can be used to assess any factor.

| Assessment	Very good	Good	Satisfactory	Normal	Weak
Points	05	04	03	02	01

In this way considering all factors independently a business ideas assessment sheet can be prepared as shown below in order to evaluate the business ideas.

Business ideas assessment sheet

Business Idea	Market	Raw materials	Labor	Technology	Earnings	Risk	Competition	Government support	Total points
1............ 2. 3. 4.	4	5	3	4	3	3	3	3	28

At the end of this step you will be able to select the 03 ideas (out of the 10 taken for micro analysis) which give the highest scores after summing up the points allocated according to the assessment for each of the considered criterion.

102
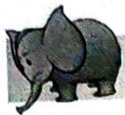
Activity 03

Assessing the business ideas using the above table, select the most suitable 03 business ideas out of the 10 business ideas selected under activity 02 .

Step 03

SWOT analysis

You have already studied the strengths, weaknesses, opportunities and threats relating to a business. By carrying out a SWOT analysis for each of the business ideas selected at the end of the micro analysis, the entrepreneur can identify the business opportunity which can be implemented easily and efficiently.

Few common factors which can be used when doing a SWOT analysis for a business idea are given below.

	Favourable factors	Unfavourable factors
Internal Environment	Strengths *Examples :-* ∗ availability of resources ∗ having skillful employees ∗ quality of the products ∗ financial stability	Weaknesses *Examples:-* ∗ Financial difficulties ∗ Outdated technology ∗ Scarcity of raw materials ∗ Lack of employee commitment
External Environment	Opportunities *Examples :-* ∗ Having a large number of consumers ∗ Competitors quitting the market ∗ Advancement of technology ∗ Availability of research and development ∗ Government incentives	Threats *Examples:-* ∗ Unnecessary political influences ∗ Strict rules and regulations ∗ Natural disasters ∗ Bad economic condition

The business idea having the maximum advantages and opportunities with minimum weaknesses and threats can be selected by carrying out a SWOT analysis for the three business ideas selected from micro analysis. That will be the most suitable business opportunity to be implemented for the entrepreneur.

So far you have studied the steps of business opportunity evaluation process including generation of business ideas, macro analysis and micro analysis and SWOT. The steps of preparation of business plan in order to implement the selected business opportunity and initiation of business will be discussed in grade 11.

7.3 Getting the legal protection for a creative business idea

The entrepreneur who enters the business world through an appropriate business opportunity can get the legal protection for the business idea. If not, there is a possibility of acquiring the respective business idea by someone else. Hence a patent right is often used by a new entrepreneur to protect an intellectual property.

Patent Rights

Patent is the government certification given for a new invention by someone. A new invention can be defined as a;

* New product
* New machine
* New process
* A combination of above factors
* Improvement to an existing invention

When a new invention is offered to the market others can copy it without it further being a secret. Hence in order to secure the ownership of the new invention a patent should be obtained and the validity period of it is 20 years. If required, the patent right can be sold to another businessman. Then the right passes to the person who buys it.

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Let us write answers.
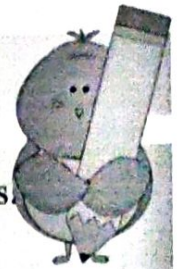
01. Give differences between business ideas and business opportunities.

02. What are the sources through which business ideas are emerged?

03. State characteristics of a good business opportunity

04. State steps of selecting a suitable business opportunity out of business ideas.

05. What are the criteria that should be considered in order to carry out a micro analysis for business ideas?

06. Show
    three strengths
    three weaknesses
    three opportunities and
    three threats for a selected business

07. What are the legal facilities available for an entrepreneur to secure his/her creative business idea?

(All the pictures appeared in this book have been downloaded from the internet)

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REPORT ABOUT THE PROGRAMME

Dt: 12-02-2022

Title of the Programme: A One day seminar on "Exploring Journey of Entrepreneurship "

Inauguration Date & Venue: 11th Feb 2022 & DNRCET Seminar Hall

Organized By: Department of ECE, DNRCET

Resource Person: Dr. D. J Nagendra Kumar, Professor & Head, Dept of IT, Vishnu Engg College, Bhimavaram

Chief Guest: Sri G. Satyanarayana Raju (Babu)

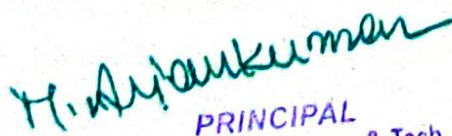Secretary & Correspondent, DNR College Association

Inauguration: Dr. M. Anjan Kumar
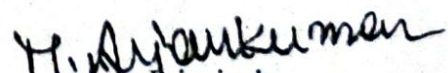
Prinicpal, D.N.R College of Engineering & Technology

Number of Faculty Attended: 35

Concept:

Entrepreneurship is the art of starting a business, basically a startup company offering creative product, process or service. We can say that it is an activity full of creativity. An entrepreneur perceives everything as a chance and displays bias in taking decision to exploit the chance. While entrepreneurship refers to all new businesses, including self-employment and businesses that never intend to become registered, startups refer to new businesses that intend to grow large beyond the solo founder.

Coordinator

Principal

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D.N.R.COLLEGE OF ENGINEERING & TECHNOLOGY

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Ph: 08816-221238 Email: dnrcet@gmail.com website: https://dnrcet.org

A One day seminar on "Exploring Journey of Entrepreneurship"

Date 11-02-2022

Sl. NO	NAME OF THE FACULTY	DEPARTMENT	FN	AN
1	T. Avinash	ME		
2	M. Jagamadham	ME	M. Jagan	M. Jagan
3	Dr A Rama Murty	CSE		
4	B. Sri Devi	ECE	BS	BS
5	V. Bhavani Durga	ECE	VBD	VBD
6	L. Bujji babu	CSE	B	B
7	G. Sai Baba	EEE		
8	K. P. Mani	ECE		KPA
9	T. Geetha	ECE		
10	S. Swathi	ECE		
11	Dr. A Padmanabham	BSH		
12	G. N. D. Srinivas	EEE		
13	NSVL Soujanya	ECE		
14	D. Joseph Kumar	ECE		
15	G. Vamsi Krishna	ME		
16	M. Rama Jog. Raju	M.E	M. Rama	M. Rama
17	S. Ravi Kumar	ME		
18	G. Kotesuararao	ECE		
19	S. Rajesh	EEE	S. Rajesh	S. Rajesh
20	Dr PY V satyanarayana	BSH		
21	Dr. A. P. Ramesh	ECE	Ant	Ant
22	P. B. Swathi	ECE	P.B Swathi	P. B. Swathi
23	Y. Vikas	ME		
24	R. Ramana Babu	EEE		
25	Y. Srinivas	ECE		

M. Arjankumar

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26	S. Radha Madhuri	BSH		
27	C. Swathi	ECE	S. Swat	C. Swa
28	M. naga lakihmi	CSB	Naga	naga
29	NSVL Sowjany	FCB		
30	Dr. M. vasantha	ASH		
31	P. lalitha Rajeswari	BCB		
32	S. lakshmana Rao	CSE		
33	T. S. Chakravarthi	BSH		
34	U. Susmitha	CSB		
35	E. Rama lakihmi	CSB	Ra	Ra

K. Sati

<center>**PROFILE**</center>

Dr.D.J.NAGENDRA KUMAR

Professor & Head

CURRENT POSITION:

Dean, Statutory Affairs

Professor&Head,

Department of Information Technology

EDUCATION:

Ph.D.   from   JNTUH,

M.Tech from   ANDHRA UNIVERSITY

MCA   from   ANDHRA UNIVERSITY

RESEARCH INTEREST:

- Data Mining

- Machine Learning, Genetic Programming

Present Working in Vishnu engineering college bhimavaram

Bhimavaram

One Day Workshop on "Entrepreneurship andStartup for Beginners" by Dr.D. J. Nagendra Kumar

The Entrepreneurship in the Raw Materials Sector proceeding is a collection of papers focusing on the macroeconomic aspects of green growth, the business opportunities in the raw materials sector, and the challenges in entrepreneurship, entrepreneurship training. These papers were presented during the closing conference of LIMBRA ('Decreasing the negative outcomes of brain drain in the raw materials sector'), a project funded by EIT Raw Materials in the period of 2019-2021. LIMBRA primarily aims at generating new entrepreneurial ideas in the raw materials sector, and to encourage engineering students graduating in raw materials-related programmes to start their own businesses. This proceeding offers a good summary of our approach, and our results: identify the critical trends in the macroeconomic environment; learn about the specifics of the raw materials markets; develop new business ideas, and rely on your local ecosystem for extra knowledge, mentoring; and finally, help students to "Become stay-at- home entrepreneurs".

Every company needs "literature," printed pieces that do a careful and well thought-out job of presenting its products and services: catalogs, newsletters, product sheets and brochures, letterhead, business cards, presentation folders, specification sheets, case histories or application sheets, special event brochures, annual reports, manuals, technical bulletins, posters, product insert sheets, labeling, recruitment materials and so on.

With the increased availability of powerful desktop publishing systems and software, many companies decide to meet these needs internally. Resist this impulse. Your homegrown materials will betray their off-the-cuff origin to most of the people who read them. Appearance is reality in marketing, and you have to look as professional as you are. And no matter how creative you are, a commercial copywriter or graphic designer can vastly improve almost any materials created by an entrepreneur.

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Here are some tips in dealing with the literature needs you'll face asyour company expands and grows:

Get a logo and stationery package designed professionally. Do this, and don't change it for at least 10 years. Either hire an advertising agency to create it or a design studio/graphic artist. Don't try this yourself, no matter how artistic you consider yourself. A professional artist will make sure your stationery materials reflect your corporate personality, while maintaining a clean and professional look. They will look good in color and in black and white; they'll reproduce well in smaller sizes; they'll fax clearly; and they'll simply be more attractive than what you can expect to do yourself.

Learn the principles of solid graphic design. Understanding graphic design is a lifetime's work, of course, but some reading and a sensitive eye can teach you a lot. Get hold of some graphic designbooks at a local bookstore and educate yourself. All your printed materials should follow fundamental design principles:

- Keep the look clean and simple. Don't overload the reader visually. Use a graphic grid to align the different elements in an orderly fashion.

- Use heads and subheads to lead the reader. When the reader turns the page, where will he or she look? Use heads and subheads to provide scanning points to keep the reader moving along.

- Avoid too much type. Pages filled with writing are not appealing to the reader. Break up the copy with photos, illustrations, cartoons, charts and so on.

- Use white space. Avoid a crowded look, despite the temptation to make use of every inch of paper you are paying for. White space serves as a visual frame for the rest of the content on the page.

- Stay with standard formats unless you have a good reason not to.All of us have grown accustomed to the standard 8-1/2" x 11"

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format for print materials. Even our filing systems are made for things that size. If you go with an unusual size, your pieces may not lend themselves to being filed easily for reference.

- Put a caption with each photo. We all want to know what we are looking at. And a caption gives you the chance not just to identify your product but to remind the reader of the benefit.

- Use charts and graphs rather than tables. A brochure is a visual document. Use graphics to boost visual interest and make numbers meaningful.

Be sure your materials have a "family look." Every piece of literature doesn't have to look identical, but they should all look planned as a compatible unit. Imagine your literature laid out in front of you on a conference table. Does it all look like it comesfrom the same company? It should.

Invest in good photography. Small companies sometimes scrimp on getting good photos of their equipment, their job sites, their equipment in use or their accessories and supplies. Strong, professionally done photography will set you apart from other smallcompanies. Your customers want to be reassured of the quality of your product. Amateur snapshots give a very damaging impression of your professionalism. Good photography is an investment in yourfuture.

Appoint one person as lit boss. Your literature needs will be ever changing, with trade shows, with new products and markets and with normal growth. You must have one person responsible for anticipating future needs, handling literature production and maintaining inventory. Untended literature grows increasingly less useful and more frustrating. Every new piece should have a written rationale, audience description and content outline, not unlike the

rationale you develop for a piece of advertising copy.

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