

Name : Dr.G. MADHU,

M.Tech., Ph.D., MIEEE, MACM, MCSI, MISTE, MIRSS, MIAENG

Certificates : AI/ML Certified Professional from IIIT Hyderabad, Jan 2020

**Designation**: Professor

**Department:** Information Technology

AICTE ID : 1-464123017 Date of Birth : 15-06-1975

Mail.ID : madhu g@vnrvjiet.in

Experience (in years): Teaching: 19 Y

Research: 13 Y

Others (If any, Specify):

### 1. Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D.)	Year of passing	Specialization
1	Ph. D - J.N.T.University, Hyderabad	2015	Computer Science & Engg
2	M.Tech - J.N.T. University, Hyderabad	2008	Computer Science & Engg

### 2. Teaching and Learning:

- 2.1. Teaching Interests: Artificial Neural Networks, Data Warehousing, Data Mining, Machine Learning, Design and Analysis of Algorithms, Mathematical Foundation of Computer Science, Machine Learning, Semantic Web, Soft Computing.
- 2.2. Novel Teaching & Learning Techniques adopted: LBD, WIT & WIL, POGIL
- 2.3. Involvement in curriculum updating / Design: IT Dept. Autonomous Academic BoS Member.
- 2.4. Hands-on contribution to Artificial Intelligence and Machine Learning.

### 3. Co-curricular and Extra-Curricular Activities

- 3.1. Interests and Hobbies: Playing Chess, Listening to Music, and Traveling
- 3.2. CCA/ECA Organized:
  - o Participated in Technical-Fest, Convergence- 2023
  - o Participated in Technical-Fest, Convergence- 2022
  - o Participated in Technical-Fest, Convergence- 2019
  - Participated in Technical-Fest & Organized Machine Learning Workshop in Convergence- 2018
  - o Participated in Technical-Fest, Convergence- 2017
  - o Participated in Technical-Fest, Convergence- 2016
  - o Participated in Technical-Fest, Convergence- 2015

- o Participated in Technical-Fest, Convergence- 2014
- o Participated in Technical-Fest, Convergence- 2013
- o Participated in Technical-Fest, Convergence- 2012
- o Participated in Technical-Fest, Convergence- 2011

### 3.3. CCA/ECA participated:

- o Dept. Coordinator for Open House from 2015 to date.
- DRDO-DRL Project poster presentation at Open House 2015, 2016, 2017, 2018, 2019 & 2023.
- o RPS Project poster presentation at Open House 2019 & 2023.
- o B. Tech Project Expo as part of Show & Tell.
- o Participated in Art of Teaching & POGIL, May -2013.
- o Coordinated for Industrial visit to TCS Campus, Madhapur, Hyderabad-2012.

### 3.4. Counseling and Mentoring Activity:

• Involved in Dept. committee for students counseling and mentoring activity personally with the UG & PG.

#### 3.5. Committees involved in:

- Department level:
  - a) AI/ML Coordinator
  - b) Dept. R & D Member
  - c) B. Tech Projects In-charge
  - d) Societal Projects In-charge
- Institute Level:
  - a) BoS Member
  - b) Dept. Research Project Coordinator
  - c) Open House Coordinator
  - d) Machine Learning Trainer & Coordinator
  - e) Publication Section Coordinator

### 4. Conference / Workshop / Seminar / Guest Lectures:

### 4.1 Conducted: Session's organizer

• Chaired a technical session in the international conference on computation intelligence & data analytics (ICCISA-2022) in association with Springer organized by the Department of Information Technology, Vasavi College of Engineering, Hyderabad, Telangana, India, during 8-9 January 2022.

- One Week Faculty Development Programme on "Artificial Intelligence and Machine learning" organized by Dept. of CSE, IT & ECE in collaboration with CSI & ACM, 13<sup>th</sup> -17<sup>th</sup> July 2020.
- A Five-day faculty summer program on "Machine Learning", organized by the Department of Information Technology in association with ACM, 20<sup>th</sup> -25<sup>th</sup> May 2019.
- A Two-day National Workshop on Machine Learning in Convergence-2018, during the period 5<sup>th</sup> -6<sup>th</sup> Feb 2018.
- A three-day 7<sup>th</sup> International Advance Computing Conference at VNRVJIET, during the period 5<sup>th</sup> -7<sup>th</sup> Jan 2017.
- A three-day International Conference on Data Sciences at VNRVJIET, during the period 26th 28th Feb 2014.
- A Two Weeks AICTE Sponsored Staff Development Program on "RECENT TRENDS IN CLOUD COMPUTING & SECURITY" at VNRVJIET, Hyderabad. During the period 3<sup>rd</sup> 15<sup>th</sup> June 2013.
- A three days workshop on "Network Management System" with industrial case studies in collaboration with SIEMENS, during the period 27th 29th Jan 2011.
- A Two Weeks AICTE Sponsored Staff Development Program on "RECENT TRENDS IN NETWORKING & SECURITY" at VNRVJIET, Hyderabad. During the period 13th 26th June 2011.

#### 4.2 Attended:

Attended online short-term course on "Data Visualization for Deep Learning
Using Power BI and Tableau", organized by Dept. of CSE, NIT Warangal and
Dept. of IT, VNR Vignana Jyothi Institute of Engineering and Technology,
Hyderabad, from 23-02-2023 to 28-02-2023.

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- Attended online faculty development program on "Intelligent Interactive Medical Services", organized by ATAL Academy & CHRIST (DEEMED TO BE UNIVERSITY) from 02-08-2021 to 06-08-2021.
- Attended online faculty development program on "Applied Machine Learning and Data Science", organized by ATAL academy & Indian Institute of Information Technology, DHARWAD from 17-05-2021 to 21-12-2021.
- Attended online faculty development program on "Machine Learning", organized by ATAL Academy & R.M.K College of Engineering & Technology, from 07-12-2020 to 11-12-2020.
- Attended online faculty development program on "Artificial Intelligence", organized by the Department of Information Technology, SIR C.R. REDDY College of Engineering in association with National Youth Council of India and Brain O Vision Solutions India Pvt.Ltd, from 22<sup>nd</sup> May-2020 to 26<sup>th</sup> May 2020.
- Attended Two Weeks of TEQIP Online Certificate Programs on "Digital Transformation in Teaching-Learning Process", organized by IIT Bombay from 16<sup>th</sup>-30<sup>th</sup> March 2020.
- Attended a National webinar of "Introduction of Data Science, Data Modelling and Analysis of COVID-19 Data" on 23 May 2020 organized by the Department of Computer Science and Information Technology, Chameli Devi Group of Institutions, Indore.

- Attended 1-Week Workshop on "Blockchain Technologies" held at VNRVJIET, Hyderabad from 17.12.2018 to 21.12.2018.
- Attended One Week 3<sup>rd</sup> Summer School on "Computer Vision & Basics of Modern AI", IIIT Hyderabad, CVIT-July 2nd-7th 2018.
- Attended One Week Workshop on "Big Data Analytics", Conducted by the Dept. of CSE, VNRVJIET with CSI collaboration from 25<sup>th</sup> to 30<sup>th</sup> June 2018.
- Attended One day a workshop on Artificial Intelligence and Signal Processing using MATLAB, Park Hyatt Hyderabad, Telangana, India. 05-12-18.
- Attended One Week approved FDP on Data Analytics with R by NIT Warangal, held at VNRVJIET, Hyderabad from 15<sup>th</sup> May 20<sup>th</sup> May 2017.
- Attended Four Week AICTE approved FDP by IIT Bombay Use of ICT in Education for Online and Blended Learning, held at VNRVJIET, Hyderabad from 2nd May 10th July 2016.
- Attended 6-Day TEQIP Workshop on Deep Learning for Visual Computing (WDLVC-2016) held at IIT Hyderabad from June 20<sup>th</sup> -25<sup>th</sup> 2016.
- Attended Three Day Workshops on Research Issues and Application of Soft Computing, organized by VNRVJIET, IT Dept. Hyderabad, March 28<sup>th</sup>-30<sup>th</sup> 2016.
- Attended One Day Workshop on Predictive Analysis with Rapid Miner, jointly organized by IEEE Hyderabad Section and IEEE Computational Intelligence Society, 22nd Aug 2015.
- Attended One Day Workshop on High-Performance Computing Code Modernization (Parallelization), organized by VNRVJIET, IT Dept. Hyderabad, 10<sup>th</sup> July 2015.
- Attended Three Day Workshops on Big Data Analysis & Cloud Computing organized by VNRVJIET CSE Dept., Hyderabad, Sept 4th-6th, 2014.
- Attended One Day Seminar on Introduction to Cloud Context & Cloud models and capabilities organized by VNRVJIET CSE Dept., Hyderabad, Sept 5th, 2014.
- Attended Three Day Workshops on Data Sciences organized by VNRVJIET CSE & IT Dept. Hyderabad, Feb 26th, 2014.
- Attended Two Day Workshop on Rough Sets and Knowledge Technologies (RSKT), jointly organized by JNTU Hyderabad and ISRS chapter Hyderabad, Nov 10th -11th 2013.
- Attended Five Day Workshop for Computer Science Teachers", jointly organized by ACM Hyderabad Chapter, and IIIT Hyderabad, May 16th to 20th 2013.
- Attended Three Day International Workshop on Rough Sets and Knowledge Engineering, organized by GVP College of Engineering, Visakhapatnam, NOV 9th to 11th 2012.
- Attended a Three Day Workshops on the 5th Multidisciplinary International Workshop on Artificial Intelligence (MIWAI 2011), jointly organized by Mahasarakham University, Thailand, and University of Hyderabad, Dec 7th to 9th 2011.
- Attended One Day Workshop on Web-Mining, Jointly organized by UGC-Academic Staff College, JNTUH, and GRIET, Feb-12th, 2011.
- Attended International Workshop on Fuzzy Logic, Computer Arithmetic, and Symbolic Computing, SIT building, JNTUH, Oct-9-10, 2010.
- Attended Colloquium on Computational Intelligence, organized by Dept. of Computer and Information Science, University of Hyderabad. March 23rd-24th, 2010.

- Attended a workshop on Data warehousing & Data mining at JNTUH conducted by IIIT Hyderabad, in March 2009.
- Attended a workshop on Web Technologies at JNTUH conducted by JNTUH, in March 2009.

### 5. Academic Contribution and Research & Consultancy:

- 5.1. Invited Lectures: 20
- 5.2. Articles / Chapters published in Books: **06**
- 5.3. Books published as a single author or as an editor: **01**
- 5.4. Projects Guided:

### a) UG:

S. No	Name of the Project	Status	Year
1.	Deep Ensemble of Capsule Neural Network based Diagnostic Model for the Covid-19 Classification	Completed	2022-2023
2.	Deep Xception Capsule Neural Networks for the Classification of Common Ultrasound Maternal Fetal Planes	Completed	2022-2023
3.	A Deep Convolutional Neural Network-based Diagnostic Model for detection of COVID-19 from CT Scan Images	Completed	2021-2022
4.	Compositional Coding Capsule Neural Networks with <i>k</i> -Means Routing Mechanism for Malaria Parasites Classification	Completed	2021-2022
5.	Self-attention mechanisms in Large Scale Image Recognition at Scale	Completed	2020-2021
6.	Impact of self-supervision techniques in computer vision	Completed	2020-2021
7.	Transfer Learning approach for malaria parasite detection from microscopic images	Completed	2019-2020
8.	Development of Deep Learning Approach for Face Recognition	Completed	2018-2019
9.	A Computational Framework for Segmentation of Malaria Parasite using interval Type-2 Fuzzy Clustering Algorithm	Completed	2017-2018
10.	Mining closed Sequential Patterns	Completed	2016-2017
11.	Computer vision for Detection Malarial Parasite based on Machine Learning Algorithm	Completed	2015-2016
12.	Automated screening of Malaria Parasite Detection Using Machine	Completed	2014-2015

	Learning Methods		
13.	Employee Tracking system-E.Gov Project	Completed	2013-2014
14.	An Efficient Classification Learning Algorithm in the Diagnosis of Malaria	Completed	2012-2013
15.	Knowledge Extraction using Decision Tree Approach for Classification of Remote Sensed Image.	Completed	2011-2012
16.	Trace Back of DDOS Attacks using Entropy Variations.	Completed	2010-2011

### b) PG:

S.No	Name of the Project	Status	Year
1	A Deep Learning-based Approach For	Ongoing	2022-2023
	Forgery Detection And Localization of		
	Surveillance Video's		
2	A Deep Learning Framework for	Ongoing	2021-2022
	Object-Based Forgery detection in		
	Surveillance videos		
3	A Deep Convolutional Capsule	Completed	2020-2021
	Network with traffic sign		
	Classification and Detection with		
	Voice Recognition		
4	An Effective Density-based Clustering		2017-18
	and Deep Learning Approach for IDS		
	An Efficient Approach for IDS based		
5	on Distributed Computing using	Completed	2015-2016
	Modified Kernel k-Means with C4.5		
	Machine Learning-based algorithm for		
6	Intrusion Detection System in Multi-	Completed	2014-2015
	agent System		
	Intelligent Based Imputation Methods		
7	for Text Mining Applications to	Completed	2013-2014
	Phishing Alerts		

# 5.5. Research Interests: Algorithms, Computer Vision, Deep Learning & Machine Learning

### 5.6. Ph.D. students:

a) Enrolled: Nilb) Submitted: Nilc) Awarded: Nil

# 5.7. Papers published in Peer reviewed Journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1.	NIPUNA: A Novel Optimizer Activation Function for Deep Neural Networks	Axioms 2023, 12, 246. https://doi.org/10.3390/axi oms12030246 SCI Indexed	ISSN: 2075-1680	1.824	International
2.	Secured and Privacy- Preserving Multi- Authority Access Control System for Cloud-Based Healthcare Data Sharing.	Sensors 2023, 23, 2617. https://doi.org/10.3390/s23 052617 SCI Indexed	ISSN: 1424-8220	3.847	International
3.	A Real-Life Decision- Making Problem with Hendecagonal Fuzzy Numbers	Journal of Intelligent & Fuzzy Systems, vol. 43, no. 6, pp. 7923-7936, 2022. DOI: 10.3233/JIFS-212416, SCI Indexed	ISSN 1064-1246 (P)	1.737	International
4.	New Decision-Making Technique based on Hurwicz Criteria for Fuzzy Ranking	Computers, Materials & Continua, vol. 73, no.3, pp. 4595–4609, 2022. https://doi.org/10.32604/c mc.2022.029122 SCI Indexed	ISSN:154 6-2226	3.860	International
5.	Narayana 1.0: Emergence of New Information Based Technology for the Diagnosis of COVID-19 and the Related Support	J. Innovation Sciences and Sustainable Technologies Vol. 2, Issue. 4 Pp.175-180 https://doie.org/10.0213/JI SST.2023200513	ISSN: 2583-3324		International
6.	DSCN-net: a deep Siamese capsule neural network model for automatic diagnosis of malaria parasites detection	Multimedia Tools Appl (2022). https://doi.org/10.1007/s11 042-022-13008-6 SCI Indexed	1573-7721	2.757	International
7.	Deep Stacked Ensemble Learning Model for COVID-19 Classification	Journal Computers, Materials & Continua Vol.70, No.3, Pages 5467- 5486 SCI Indexed	ISSN: 1546-2226 (online)	3.772	International
8.	Malaria Eradication Strategies Program (MESP): Challenges and Information Technology (IT) Perspectives	J. Innovation Sciences and Sustainable Technologies, Vol. 1, Issue.4 Pages 341-351.	ISSN: 2583-3324		National
9.	Dynamic Routing Among Capsule Neural	J. Innovation Sciences and Sustainable Technologies,	ISSN: 2583-3324		National

	Networks for Malaria Parasite Classification: An Empirical Investigation	Vol. 1, Issue.2 Pages 177-188.			
10	A Diagnostic Model for Malaria Parasite Detection from Thin Blood Smear Images using Neural Networks	Journal Innovation Sciences and Sustainable Technologies, 1(1) (2021), 39-52.	ISSN: 2583-3324		National
11	Imperative Dynamic Routing Between Capsules Network for Malaria Classification	Journal Computers, Materials & Continua Vol.68, No.1, Pages 903- 919 SCI Indexed	ISSN: 1546-2226 (online)	3.772	International
12	A Novel Algorithm for Segmentation of Parasites in Thin Blood Smears From Microscopy Using Type- II Fuzzy Sets and Inverse Gaussian Gradient	International Journal of Computer Vision and Image Processing (IJCVIP), 9(3), 1-22.	ISSN: 2155-6997	UGC	International
13	An Approach for Imputation and Classification of Medical Data Using Class-Based Clustering of Medical Records	Computers & Electrical Engineering An International Journal SCI Indexed	ISSN: 0045-7906	1.570 / SCI	International
14	A New Paradigm for Development of Data Imputation Approach for Missing Value Estimation	International Journal of Electrical and Computer Engineering Vol.6. No.6, Dec 2016	ISSN: 2088- 8708	Scopus, UGC Recognized , Journal No.2928	International
15	An Algorithm for Clustering and Classification of Medical Datasets using k-Means and Radial Basis Function Neural Networks	International Journal of Data Mining & Emerging Technologies (Vol. 6, No. 1, May 2016)	Print ISSN: 2249-3212	UGC Recognized , Journal No.2928	International

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16	A Novel Discretization Algorithm for Continuous Attributes: A Machine Learning Approach	International Journal of Data Mining and Emerging Technologies, Vol.4. Issue.1, PP. 33- 43,2014	Print ISSN: 2249- 3212. Online ISSN: 2249-3220	UGC Recognized , Journal No.2928	International
17.	Features Selection Algorithm with Discretization and PSO Search methods for Continuous Attributes	International Journal of Computer Science and Information Technologies (IJCSIT), Vol.5(2), PP. 1398-1402, 2014	ISSN: 0975-9646	2.93	International
18.	A Non-Parametric Discretization Based Imputation Algorithm for Continuous Attributes with Missing Data Values	International Journal of Information Processing, Vol.8, Issue.1, PP.64-72, 2014	ISSN: 0973-8215	UGC Recognized , Journal No. 22945	International
19.	A New Discretization Method for Continuous Laboratory Features in the Diagnosis of Dengue Fever	Indian Journal of Medical Informatics, [S.l.], vol. 8, no. 1, May. 2014.	ISSN 0973-0397	UGC Recognized , Journal No. 44755	International
20.	A New Imputation Algorithm Based Approach for Missing Attribute Values in Databases: An Experimental Approach	International Journal of Artificial Intelligence and Knowledge Discovery, vol.2. no.2, 2012.	ISSN: 2231-2021	0.50	International
21.	A Novel approach to attribute reduction under data mining process is using rough set theory	International Journal of Mathematical Archive-2 (9), page. 1545-1549, 2011.	ISSN 2229-5046	1.20	International
22.	An Impudent Approach for Intelligent Data Mining Using Rough Set Theory	International Journal of Computational Intelligence Research. Vol.7, Number 2, pp. 159- 168.2011.	ISSN: 0973-1873	Google	International
23.	Intelligent Semantic Web Search Engines: A Brief Survey	International Journal of Web & Semantic Technology (IJWesT) Vol.2, No.1, page, 34-42, January 2011.	ISSN: 0975-9026	47-Citations March 2016	International
24.	Hypothetical Description for Intelligent Data Mining	International Journal on Computer Science and Engineering. Vol.02,	ISSN 22295631	UGC Recognized , Journal	International

		No.07, 2010.		No. 7778	
25.	A Scalable Formalism for Handling Uncertainty in Semantic Web	International Journal of Computer Science & Communication Technologies, vol.2, Issue 2, Jan 2010.	ISSN- 0974-3375	0.620	International
26.	A Quality Assessment and Handling Uncertainty in Health care Data Mining	International Journal of Computing and Mathematical Applications vol. no.1-2, January- December 2008.pp199- 213	ISSN: 097 4-4312	Google	International
27.	Data Mining for Genetics: A Genetic Algorithm Approach	Journal of Convergence Information Technology, Korea. Vol 3 Number 3 September 2008.pp 39-45.	ISSN: 1975-9320	Google	International
28.	Recent Advances in Uncertainty Theories: A Brief Survey	Research Journal of Engineering and Technology, April-June 2008, Volume: 1 Issue: 1. pp 22- 31,	ISSN 0974-2824	JNTU Hyd Journal	International
29.	A New Framework for Building Decision Trees under Uncertainty	International Journal of Applied Mathematical Analysis and Applications. January-December 2007, Volume 2 No. 1-2,	ISBN :- 0973-3868	UGC SERIAL NO. :- 16380	International
30.	Application on Fuzzy Theory for Handling Uncertainty to Spatial Data Mining.	International Research Journal ACTA CIENCIA INDICA -Published Dec 2005	ISSN – 0970 – 0455	Google	International

# **5.8.** Chapters published in reviewed Book Series:

S.No	Title of the Chapter	Book Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1	Emerging Computational Approaches in Telehealth and Telemedicine: A Look at The Post- COVID-19 Landscape	Advances in Data Science- Driven Technologies (Volume 1) DOI: 10.2174/978981507927212201 01	ISBN: 978- 981-5079-28- 9		International
2	Automatic Screening of	Artificial Intelligence Applications for Health Care,	97810032414 09		International

	COVID-19 Based	1st Edition, CRC Press			
	on CT Scan Images	pp. 139-161, 2022			
	Through Extreme	https://doi.org/10.1201/9781003			
	Gradient Boosting	241409			
	Artificial	Intelligent Interactive			
	Intelligence Based	Multimedia Systems for e-			
	Diagnostic Model	Healthcare Applications,	Online ISBN		International
3	for the Detection of	pp.215-233, 2022 Publisher	978-981-16-	01	International
	Malaria Parasites	Springer, Singapore	6542-4		
	from Microscopic	https://doi.org/10.1007/978-			
	Blood Images	981-16-6542-4_12			
		Demystifying Big Data,			
	Convolutional	Machine Learning, and Deep			
	Siamese networks	Learning for Healthcare	ISBN		
4	for one-shot	Analytics, pp.277-306	978-0-12-	04	International
	malaria parasite	Publisher Academic Press,	821633-0	0-	
	recognition in	Elsevier 2021	021033-0		
	microscopic images	https://doi.org/10.1016/B978-0-			
		12-821633-0.00007-6			
	Computer Vision				
	and Machine				
	Learning Approach	Machine Learning for	Online ISBN		
5	for Malaria	Intelligent Decision Science,	978-981-15-	08	International
	Diagnosis in Thin	Springer, Singapore, Book	3689-2	00	International
	Blood Smears from	Chapter 03 April 2020	3007 2		
	Microscopic Blood				
	Images				
	A Novel Approach	Histopathological Image			
	of K-SVD-Based	Analysis in Medical Decision	ISBN13:		
6	Algorithm for	Making. IGI Global, 2019. 154-	97815225631	08	International
	Image Denoising.	180. Web. 4 Apr. 2019.	67		
	image zenousing.	100 <b>2</b> 0 <b></b>			

# 5.9. Papers presented at National / International Journals:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Simple Attention Block Embedded in Standard CNN for Image Classification	International Conference on Applied Artificial Intelligence and Computing (ICAAIC), 2022, pp. 279-284, DOI: 10.1109/ICAAIC53929.2022.9 793110	International	2022
2	Improvising the Learning of Neural Networks on Hyper spherical Manifold	Neural Information Processing Systems- LMRL - Learning Meaningful Representations of	International	2021

		Life		
3	Capsule Networks for Malaria Parasite Classification: An Application Oriented Model	2020 IEEE International Conference for Innovation in Technology (INOCON), BENGALURU, 2020, pp. 1-5, doi: 10.1109/INOCON50539.2020. 9298425.	International	2020
4	A Normalized Mean Algorithm for Imputation of Missing Data Values in Medical Databases	Innovations in Electronics and Communication Engineering. Lecture Notes in Networks and Systems, vol 107. Springer, Singapore. https://doi.org/10.1007/978-981-15-3172-9_72	International	2020
5	A Novel Algorithm for Missing Data Imputation on Machine Learning	2019 International Conference on Smart Systems and Inventive Technology (ICSSIT)	International Scopus indexed	2019
6	A Normalized Mean Algorithm for Imputation of Missing Data Values in Medical Databases	8th International Conference on Innovations in Electronics and Communication Engineering (ICIECE – 2019)	International Scopus indexed	2019
7	Gaussian Membership Function and Type II Fuzzy Sets Based Approach for Edge Enhancement of Malaria Parasites in Microscopic Blood Images	International Conference on ISMAC in Computational Vision and BioEngineering, pp. 651664. Springer, Cham, 2018.	International Scopus indexed	2018
8	Improve the classifier accuracy for continuous attributes in biomedical datasets using new discretization method	Information Technology and Quantitative Management (ITQM 2014),Procedia Computer Science Elsevier ,Moscow, Russia	International Scopus/Web of Science	June 3rd - 5th, 2014
9	A Novel discretization method for numerical attributes with missing datasets: A Machine learning approach	7th International Conference on Data Mining and Warehousing (ICDMW-2013), Elsevier Publications, pp.93- 101,	International	9 <sup>th</sup> -11 <sup>th</sup> Aug 2013
10	A New Feature Selection Discretization Algorithm for continuous attributes	2 <sup>nd</sup> International Conference on Advanced Computing Methodologies, Elsevier Publications, ,	International	2 <sup>nd</sup> to 3 <sup>rd</sup> Aug 2013.

	A Novel Index Measure	12th IEEE International		Dec 18th -
11	Imputation Algorithm for	conference on Computational	International	20th 2012,
	Missing Data Values: A Machine Learning Approach	Intelligence and Computing Research (ICCIC).	Thermational	pp.1-7.
12	Expert Rule Miner: A New Framework for Handling uncertainty and Quality Assessment in Data Mining process	International conference, systemic, Cybernetics, and Informatics (ICSCI-2006). Organized by pentagram center Pvt. Ltd.	International	January 4th -8th 2006.
13	Managing uncertainty and quality assessments in Banking Data Mining: A New approach	International Conference on Current Trends in IT, organized by S.R.K.R Engineering college, china Amiram, Bhimavaram- 534204.A.P.INDIA	International	1 <sup>st</sup> to 3 <sup>rd</sup> , Oct 2005
14	Handling uncertainty in Spatial Data Mining: With Fuzzy Approach	International Conference on Environmental Management (ICEM-2005) organized by J.N.T.University, Hyd.	International	28th -30th Oct-2005.
15	Handling uncertainty in Integration of Hybrid GIS Environment	14th congress of ANDHRA PRADESH SOCIETY FOR MATHEMATICAL SCIENCES organized by Dept of Basic Sciences and Humanities, College of Engineering, GITAM. Vizag - 530045	National	9th -11th Sept-2005
16	Data Mining Techniques in Real World	13th Congress of ANDHRA PRADESH SOCIETY FOR MATHEMATICAL SCIENCES, organized by Dept. of Mathematics and Humanities NIT Warangal- 506004 (A.P)	National	10th -12th December 2004
17	Connectionist Expert Systems for Low-Level Image Segmentation	XII Congress of ANDHRA PRADESH SOCIETY FOR MATHEMATICAL SCIENCES organized by Dept. of Mathematics, Osmania University, Hyderabad.	National	12th -13th December 2003

### **5.10. Sponsored Research Projects:**

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
1	Automatic Diagnostic Model for Detection of Malaria Parasites from Microscopic Images	JNTUH- TEQIP-3	1-Year	Rs.2,98,000/-	Completed
2	Development of a Machine Learning Based Algorithm for Computer Aided-Diagnosis of Malaria	DRDO, DRL, TEZPUR- ASSAM	2-Years (2015-17)	Rs. 7,75,080/-	Completed

### **5.11 Patents**

- 1. Madhu Golla et al., (2023). Title of the invention "AI based Smart Pulse Oximeter", Indian Patent, Application No. 356667-001 A, Date of filing of Application: 13/01/2022, Granted date: 14/03/2023
- 2. Madhu Golla et al., (2022). Title of the invention "AI-based prediction model, method for the compressive strength of Geopolymer concrete", Indian Patent, Application No. 202241057660 A, Date of filing of Application: 08/10/2022, Publication date: 21/10/2022.
- 3. Madhu Golla et al., (2021). Title of the invention "Deep Learning-Based Detection of Abnormality Scenarios for Computer Vision-Based HAR Systems", Indian Patent, Application No.202141024137 A, Date of filing of Application: 31/05/2021, Publication Date: 25/06/2021.

### **5.12 Invited Lecture/Talks:**

- 4. Delivered lecture/s as a resource person in a week PDP on "AI and Deep Learning", "organized by the Department of Information Technology, Institute of Aeronautical Engineering, Hyderabad-500043, TS, India from 26-09-2022 to 01-10-2022.
- 5. Delivered lecture/s as a resource person in a week PDP on "Applied Artificial Intelligence and Expert Systems", organized by the Computer Science and Engineering (AIML), Institute of Aeronautical Engineering, Hyderabad-500043, TS, India from August 8 -13, 2022.
- 6. Delivered lecture/s as a resource person in a Two-week Online Refresher Course on "Artificial Intelligence" and delivered a lecture on "Advanced Deep Learning", "organized by The UGC-Human Resource Development Centre, JNTUH from 23-05-2022 to 04-06-2022.
- 7. Delivered lecture/s as a resource person in the Refresher Course on Non-linear Analysis for the Development of Neural Network Systems organized by UGC-Human Resource Development Centre (HRDC) of Guru Ghasidas Vishwavidyalaya from 13/09/2021 to 25/09/2021.
- 8. Guest Lecture on "Introduction to Deep Neural Networks" in Three-day online workshop on "Machine Learning Applications", organized by Dept. of Information Technology in collaboration with ACM Student chapter VNRVJIET, 02 Sept 04 Sept 2021.
- 9. Guest Lecture on "Introduction to Machine Learning", Dept. of CSE, MIST Sathupally, Khammam. 5<sup>th</sup> July 2021.

- 10. Invited talk on "Capsule Networks: A New Deep Learning Network", Online AICTE Sponsored STTP on Machine Learning & Deep Learning Techniques for Artificial Intelligence Problems using Python-Series-II, 2020, Dec 2020, VNRVJIT, Hyderabad-90.
- 11. Invited talk on "Introduction to Convolutional Neural Networks", Online AICTE Sponsored STTP on Machine Learning & Deep Learning Techniques for Artificial Intelligence Problems using Python- Series-I 2020, Nov 2020, VNRVJIT, Hyderabad-90.
- 12. Invited talk on "Pre-Processing Techniques & Decision Trees in Machine Learning", Online FDP on Artificial Intelligence & Machine Learning, July 2020, VNRVJIT, Hyderabad-90.
- 13. Invited talk on "Pre-Processing Techniques in Machine Learning", Online FDP on Artificial Intelligence & Machine Learning for Engineering Applications, June 2020, VNRVJIT, Hyderabad-90.
- 14. Guest Lecture on "Artificial Intelligence and Machine Learning", FDP organized by CSE, IT & ECE, VNRVJEIT, July 2020.
- 15. Guest Lecture on "Artificial Intelligence and Machine Learning for Engineering Applications", FDP organized by CSE, IT & ECE, VNRVJEIT, June 2020.
- 16. Training Program Lecture on "Machine Learning using Python", 12 Weeks Program organized by Dept. of Information Technology, VNRVJIET, 26<sup>th</sup> Dec-2019- 2<sup>nd</sup> April 2020.
- 17. Training Program Lecture on "Machine Learning using Python", 12 Weeks Program organized by Dept. of Information Technology, VNRVJIET, 29<sup>th</sup> Dec-2018- 30<sup>th</sup> March 2019.
- 18. Guest Lecture on "Evolutionary Algorithm using KEEL Tool" One Week National FDP on Recent Advances and Applications in Cognitive Computing, Institute of Aeronautical Engineering, Hyderabad, 28<sup>th</sup> May 2018.
- 19. Guest Lecture on "Machine Learning Algorithms using KEEL Tool", Two Day National Level Workshop at Dept. of Information Technology, VNRVJIET, 28th 29th March 2016.
- 20. Guest Lecture on "Solving Clustering Problem using Self-Organizing Map Networks", Six-Day National Level Workshop at Dept. of ECE, VNRVJIET, 14th 19th Dec 2015.
- 21. Guest Lecture on "MATLAB for Engineering Applications", Two Day National Level Workshop at CBIT, 11<sup>th</sup> -12<sup>th</sup> Sept 2015.
- 22. Seminar on "Development of a Machine Learning based Algorithm for Computer aided-diagnosis of Malaria", at DRL-DRDO, Tezpur, 30th Oct 2014.
- 23. Seminar on "Development of a Machine Learning based Algorithm for Computer aided-diagnosis of Malaria", at LSRB, DRDO, Delhi, 30th June 2014.

### 6. Awards / Honors received:

S.No.	Type of Award	Organization	
1.	Award of Excellence in AICTE FDP	IIT, Bombay, 2016	
	Programme		
2.	Reviewer for Journal of Convergence	Dongguk University, Korea,2009	
	Information Technology	to 2014.	
3.	Reviewer for Journal of Soft Computing	Springer, Germany, June 2013 to	
	Reviewer for Journal of Soft Computing	date	

4.	Reviewer for Journal of Experimental & Theoretical Artificial Intelligence,	Taylor & Francis, Nov 2015 to till date	
5.	Reviewer for Multimedia Tools and Applications	Springer, Aug 2017 to date	
6.	Reviewer for Recent Patents on Computer Science	Bentham Science Publishers, March 2019 to date	
7.	Reviewer for IEEE Journal of Biomedical and Health Informatics, Nov 2020 to date.	IEEE Journal of Biomedical and Health Informatics	
8.	Reviewer for International Journal of Healthcare Information Systems and Informatics (IJHISI), Oct 2020 to date.	IGI Global, USA	
9.	Reviewer for International Journal of CMC-Computers, Materials & Continua, 5th Jan 2021 to date.	Tech Science Press, USA	
10.	AI/ML Certificate of Merit: Outstanding Performance in Artificial Intelligence and Machine Learning	IIIT Hyderabad, Jan 2020.	

7. Motto: Learning Today...... Leading Tomorrow