Name: R.Manjula sri

Designation: Professor and Head

Department: EIE

Mail.I.D: manjulasree_r@vnrvjiet.in, eiehead@vnrvjiet.in

Experience (in years): Teaching:25   Research: 14   Others (If any, Specify):

1. Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	PhD	2017	Biomedical Instrumentation
2	ME	1997	Electronic Instrumentation
3	BTech	1994	ECE
4	DECE	1990	ECE

2. Teaching and Learning:

2.1. Teaching Interests: Python Programming, Circuit Theory, Electronic Devices and Circuits, Electronic circuit analysis, Telemedicine, Industrial and Power electronics, Switching theory and Logic design, Computer Organization, Microprocessors and Microcontrollers, Digital and Linear IC applications, VHDL, VLSI Design, PC based Instrumentation, Bio-Medical Instrumentation, Image processing, Principles of communications

2.2. Novel Teaching & Learning Techniques adopted: Teaching through digital platforms-Using google class room, Microsoft teams, Class room recoring through OBS, Usase of mentimeter and podlet for interaction during online classes . Learning and teaching through you tube, TED videos and MOOCs, Implementing WIT &WIL for 80% of the content and POGIL for few topics.

2.3. Involvement in curriculum updating / Design: Involvement in curriculum updating of UG during autonomous curriculum design and updation.

3. Co-curricular and Extra-Curricular Activities

3.1. Professional Society memberships: Life member ISTE & ISOI, FIETE, Sr Member IEEE and. Member WiE-IEEE.

3.2. Interests and Hobbies:
- To promote efficiency and discipline among the students
- To promote work efficiency and good attitude towards work in organizations.

3.3. CCA/ECA Organized:
- Coordinator for Convergence 2K8, Convergence2K9 and Convergence 2K10.
- Advisor for ISOI student Chapter, VNRVJIET.
- Involved in organizing women's day celebrations

3.4. CCA/ECA participated:
- Participated TEDx VNRVJIE in 2016.
- Won prizes at World yoga day and Sports Events (for staff)celebrations at VNRVJIET.

3.5. Counseling and Mentoring Activity: Involved in mentoring twenty students every semester from the past ten years. In the capacity of Head of the department counselled many weak students and encouraged bright students towards better goals.

3.6. Committees involved in:

- Department level: DDC,DAC,DBC,CRC,BoS,PAC
- Institute Level: Governing Council, Academic Council, IAC, DC, F&PDC, FSC BoS, IQAC.
- Member, BoS: EIE,ICE,BME_,JNTUH during 2016.
- Chair_finance for IACC2017,
- Session co-chair for a technical session during IACC2017.
- Chair_Refreshments comm. During convergence and Sintillashunz 2017.
- Chair_Refreshments comm. During convergence and Sintillashunz 2019.
- Chair_Refreshments comm. During convergence and Sintillashunz 2020.
- Chair_Refreshments comm. During convergence 2021.
- Chair,Invitation committee during annual day celebrations 2023

4. Conference / Workshop / Seminar / Guest Lectures:
4.1. Conducted:
- Conducted a three day workshop on Process control Instrumentation during 2007
- Conducted a three day workshop on Biomedical Image Processing during April, 2008.
- Conducted 2 day workshop on Lab VIEW during June 2011.
- Conducted Micro Teaching for newly recruited faculty during July 2011.
- Conducted two certification courses during December 2014.
- Conducted 4 day refresher course on virtual instrumentation lab during June 2015.
- Conducted work shop on Real Time Applications using LabVIEW during July 2015
- Conducted guest lecture on Raspberry Pi and its Applications during September 2015
- Arranged a visit to IV B.Tech students to Industrial instruments Expo, Hitex, Hyderabad during Sep 2015
- Conducted work shop on - "Design, Development and Applications of Advanced Robotics" during Nov 2015
- Conducted work shop on - "Applications of computer networks and security" during Nov 2015
- Conducted 40 hrs Certification course on PLCs and SCADA during Dec 2015
- Conducted 40 hrs Certification course on Digital design through Verilog during Dec 2015.
- Conducted four work shops ,eight guest lectures and three local industrial visits for students during 2016.
- Conducted one FDP –a 3 day workshop on nanomaterials and their applications for sensors during Nov 2016.
- Conducted 40 hrs Certification course on Lab VIEW during Dec 2016
- Conducted 40 hrs Certification course on SQL during July 2016
- Conducted 40 hrs Certification course on PLC and SCADA during Dec 2016
- Conducted one day preconference workshop on Lab VIEW During IACC2017.
- 3Day Workshop on Nano materials and their applications for sensors, October 2016
- Conducted 40 hrs Certification course on PLC and SCADA during June 2017
- Conducted 40hrs Certification course on IoT during Aug2018 and Jan2019,followed by 24 hr Hackathon.
- 40 hrs certification program on(i) Machine Learning (ii) C and data Structures and (iii) training on Robotics during 2019-2020., 2020-21 and 2021-22
- AICTE-sponsored, 2-week Online Short-Term Training Programme on "Design and Structural Evolution of Advanced Functional Materials Suitable for Engineering Applications" during February- March,2021

- One Week Faculty Development program is organized on "Social Robotics & AI", by NIT Patna & IITDM Jabalpur with collaboration with VNRVJIET Hyderabad from 28th June -04th July 2021.
- IEEE SPS summer school on Intenet of Things for Biomedical and health applications,during December 28-31st 2021.
- Organized ILS IEEE conference during Aug 2022.
- Organizrd IEEE International conference ICMACC 2022 during dec2022.

4.2. Attended:
- Attended one day seminar on outcome based education on 18-12-2016 at OU ,Hyderabad.
- Attended ISOI gold medal award function at OU, Hyderabad.
- 6 Day workshop on IoT and Computer networks during Nov 2016.
- One day workshop on advances in video processing and applications on 9th Feb 2014 at BITS, Hyderabad.
- IEEE Two day work shop on Advances in Image processing and application during 26th-27th October 2013, at BITS, Hyderabad.
- Three day workshop on POGIL during July 2013,at VNRVJIET.
- Two day workshop on creative teaching during Feb,2013 at VNRVJIET.,
- 3 day Workshop on Embedded Linux on Beagle Board organized by C-DAC, Hyderabad during 14th to 16th June 2012.
- UGC Sponsored Refresher course on VLSI Design & Embedded Systems during 29th Oct 2003 -18th Nov 2003 at JNTU, Hyderabad.
- Two day national workshop on Engineering Embedded solutions using Lab view and Virtual Instrumentation on 9th and 10th Dec 2004, at G. Pulla Reddy Engineering College, Kurnool.
- Five day workshop on MATLAB programming and its Applications during 2nd-6th Jan 2007, at JNTU, Hyderabad.
- Work shop on Image and Speech Processing WISP-2008 on 13th Dec 2008 at IIIT, Hyderabad
- Two day workshop on Research methodology and data analysis, during 26th-27th Dec 2008 at VNRVJIET, Hyderabad.
- Two day workshop on Biomedical Engineering during 29th-30th April 2009, at Osmania University, Hyderabad.
- Two day work shop on ICT in Space, Defense and Industrial Applications at Visweswaraya Bhavan, Hyderabad, during July 2015.
- Open House poster presentation at VNRVJIET during Feb-March 2016.
- 7day FDP on sensor networks and Internet of Things during Nov-Dec2016.
- 7 day FDP on recent trends in signal processing and its applications during June-July2017.
- 8 week online FDP on Foundation program in ICT for education by IITBombay during Aug-Sep2017.
- 8 week online FDP on Pedagogy for Online and Blended teaching learning process by IIT Bombay during Oct-Nov 2017.
- DevCon developers conference ,Hyderabad during Oct2017.
- 2 Day online refresher course on Machine Learning Dec 17-18, 2017.
- NPTEL certification course duringJan-April 2018, on Introduction to Internet of

Things.

- NPTEL certification course duringJan-April 2018, on Machine Learning.
- One week AICTE FDP on Intelligent Computation and Deep learning,during March 2018.
- NPTEL certification course during July-Oct 2018, on Deep Learning(AICTE FDP)
- NPTEL certification course duringJuly-Oct 2018, on Biomedical nano technology.
- Attended International conference on recent Innovative trends in computer science and applications at Ramaiah Institute of Technology, Bengaluru on Prediction of severity of non proliferated diabetic retinopathy using machine learning on 26th Oct 2019.
- Attended 5 Day Workshop on Deep Learning And Neural Networks at JNTUH during 04th -08th November 2019
- Attended 5 Day Faculty Development Program on Deep Learning and Applications Organized by ECE & EIE VNR VJIET and NIT Patna at Embedded System Laboratory of ECE Dept., VNRVJIET, During 09th Dec to 13th Dec, 2019.
- Attended Seminar on Kick Start program by Remote Internship Program at VNRVJIET on 20th Dec 2019.
- Two days online workshop on patent drafting and processing with importance of trademark and copyright organized by journal of advanced engineering research & powered by hexacube,India On 08th and 9thMay 2020
- FDP on Python for ML organized by Dept.of.CSE, VNRVJIET, with CSI chapter.
- Attended Webinar on Introduction to graphical Programming – LabVIEW on 25th May 2020.
- Attended Webinar on Robotics and Automation in Industrialized Building on 27th May 2020.
- Attended Webinar on Introduction to Design Thinking on 29th May 2020.
- Attended two days online workshop on patent drafting and processing with importance of trademark and copyright organized by journal of advanced engineering research & powered by hexacube ,india during 08th and 9th may 2020.
- Online course on Data Analytics with Python in udemy ongoing.
- online course on Joy of computing through Python during Jan to April 2020.
- Coursera Machine Learning for medical diagnosis 22nd June 2020
- Coursera AI for everyone during June 2020
- NPTEL Online certification on Introduction to Artificial Intelligence during Jan to April, 2021 for 12 weeks.
- UKIERI-Leadership management workshop by Dudley Inst of Technology, UK (virtual)from Aug 2020-April2021
- NPTEL Online certification on NATE during Jan to April, 2020 for 12 weeks
- NPTEL Online certification on Python for Datascience , Jan to April, 2023 for 4 weeks
- NPTEL Online certification on Data Analytics with Python, during Jan to April, 2023 for 12 weeks

Academic Contribution and Research & Consultancy:
- 4.3. Invited Lectures: 04
- 4.4. Articles /Chapters published in Books: 03
- 4.5. Books published as single author or as editor: nil
- 4.6. Projects Guided:

a) UG: 37   b) PG: 6

4.7. Research Interests:
- Biomedical Image Processing,
- Embedded systems
- Internet of Things
- Machine Learning and Deep Learning

4.8. Ph.D students:
     a) Enrolled:1 full time & 2 part time   b) Submitted: 0   c) Awarded:0

4.9 Papers published: journals 19
                    Conferences 26

Papers published in reviewed Journals:

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ ISSN No.	Impact Factor/ Citation Index	National/ International
1	Automatic detection of Age Related Macular Degeneration from Retinal Images-	Technia–International Journal of Computing Science and Communication Technologies,Volume5,issue 2,January 2013,pp821-825.	0974-3375	0.87	International
2	Image Processing for Identifying Different Stages of Diabetic Retinopathy-	IJRTET by ACEEE,Volume11, June 2014,pp83-92.	2158-5563	2.27	International
3	Hardware implementation of Detection of Glaucoma from retinal images-	Book series of Advances in Engineering and Technology series,2013, volume 7,pp340-345	2214-0344		International
4.	Review of image processing and tele-ophthalmology research projects world over-	Technology Spectrum Journal, Nov 2010, pp42-48	0974–6854		National
5	Classification of Diabetic maculopathy from Retinal images	International Journal of Engineering & Technology, Vol 7 (2018) 254-258	ISSN: 2227-524X	4.22	International
6	Image Processing for the Detection of Diabetic Retinopathy and Diabetic Macular Edema.	REVELATION A Peer reviewed annual journal of Popular Science, Vol III,2019,pp21-26	ISSN: 2456-7698		National
7	Detection of severity of Optical nerve head damage using Optical Coherence Tomography Images	Journal of Interdisciplinary Research and Innovations, March2019	ISSN: 2348-1226		International
8	Breast masses classification using contour shape descriptors based on Beam Angle Statistics	Advances in Electrical and Computer Engineering (AECE) - Jan 2020	ISSN: 1582-7445		International

9	Compact Shape Descriptor Using Empirical Mode Decomposition to Detect Malignancy in Breast Tumour	CCIS 1367, pp. 66–74, 2021.	ISSN: 1865-0937	H-index45	International
10	Prediction of Severity of Non Proliferated Diabetic Retinopathy Using Machine Learning Techniques	Journal of Computational and Theoretical Nanoscience 2020-07-01 DOI 10.1166/jctn.2020.9049	1546-1955	H-index47	International
11	Detection and Classification of multi scale retinal junctions	Journal of Computing Science and Communication Technologies, Signal, Image and Video Processing, volume 15, Issue5, July2021, https://doi.org/10.1007/s11760-021-01986-3	1863-1711 1863-1703	H-Index-44 Impact score 1.97 SJR 0.518	International
12	Role of AI Robots during Covid-19 pandemic and its Technological limits-A review	Journal of Biomedical engineering research and review Vol 8,issue2,Dec2021	2349-3232		intrnational
13	Role of AI in Sagriculture and its applications in farming-A review	Journal of Biomedical engineering research and review Vol 8,issue2,Dec2021	2349-3232		intrnational
14	Role of AI in the diagnosis of skin diseases and its necessity -A Review.	Journal of Biomedical engineering research and review Vol 8,issue2,Dec2021	2349-3232		intrnational
15	Domain specific trained model to auto grade AV Nicking severity level	Journal of Biomedical signal processing and control Vol 76,July 2022. https://doi.org/10.1016/j.bspc.2022.103642	1746-8094	H-Index-84 (eSCI, SCOPUS)	International
16	Multi-Class Classification of Retinal Abnormality using Machine Learning Algorithms-	International Journal of Performability Engineering, (Nov) 2022, 18(11), pp. 826–832	ISSN 0973-1318	(SCOPUS)	International
17.	An efficient machine learning approach for classification of diabetic retinopathy stages,	Indonesian Journal of Electrical Engineering and Computer Science Vol. 30, No. 1, April 2023, pp. 81~88 DOI: 10.11591/ijeecs.v30.i1.pp81-88	ISSN: 2502-4752,	(SCOPUS)	International
18.	IoT based solar panel fault and maintenance detection using decision tree with light gradient boosting,	Sensors (April 2023)Vol. 27, 100726	ISSN: 1424-8220	(SCOPUS)	International

	Measurement				
19	Binary classification of Diabetic retinopathy using random forest classifier	European Chemical Buletin2023,vol11,pp2276-2284	2063-5346	(SCOPUS)	International

4.9. Papers presented at National / International conferences:

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Novel Image Processing Techniques to Detect Lesions using Lab VIEW-	IEEE Proceedings of 2011 Annual IEEE India Conference INDICON 2011,at BITS-PILANI, Hyderabad campus. (*IEEE EXplore*)	International	16th-18th December 2011
2	Measurement of diameters of Retinal Blood vessels using LabVIEW.	Proceedings of ICACCT-2012, at APIIT SD, Panipat.	International	on 3rd November 2012
3	Review of Image Processing Techniques for Automatic Detection of Eye Diseases-	IEEE Conference proceedings of ICST 2012, Kolkata,pp320-325.(IEEE Xplore) .	International	19th-21st December 2012
4	Applications of Image Processing Techniques for Automatic Detection of Eye Diseases-	International conference on Bio-signals, Images and Instrumentation (ICBSII2013) at Chennai, India.	International	14th -16th March 2013,
5	Lab VIEW based assessment of CDR for the detection of Glaucoma-	IEEE International Conference on Emerging trends in Computing, Communication and Nanotechnology(ICECCN-2013) at Tuticorin, Tamilnadu..(IEEE Xplore)	International	March 25th -26th ,2013
6	Hardware implementation of Detection of Age related macular degeneration from retinal images-	IEEE International Conference on control, computing ,communication and materials – ICCCCM 2013, at United Institute of Technology, Allahabad, INDIA.	International	August 3rd -4th , 2013
7	Detection of Age related macular degeneration using Open CV for image processing applications-	2nd International conference on Innovations in electronics and Communication engineering(ICIECE-2013) at GNIT, Hyderabad,AP, INDIA.	International	August 9th -10th ,2013,
8	Hardware implemntation of Detection of Glaucoma from retinal images	Third International Conference on Computational Intelligence and Information Technology CIIT 2013, Mumbai, India.	International	- October 18-19, 2013
9	Advanced Biomedical Instrumentation System	National Symposium on Instrumentation (NSI-33),	National	8th-10th December

	For Rural Health Care Needs.	,Organized by AUCE &ISOI, At AUCE,Visakhapatnam		2008
10	Lab VIEW Based Remote Patient Monitoring System National Conference-	Sixty years of Transistor &its impact, Organized by ATRI, at OU,Hyderabad.	National	23rd -24th October 2009.
11	Novel Telemedicine System for Rural Healthcare	-44th Mid Term Symposium on ICT in Space, Defense and Industrial applications, at Hyderabad.	National	21st -22nd April 2013
12	Detection of Glaucoma using open CV for image processing applications at 29th national convention of electronics and tele communications and	National seminar on Emerging Trends in Electronics and Telecommunications Engineering , at Hyderabad.	National	29th -30th October 2013
13	Image Processing for the Detection of Retinal Diseases - Diabetic Macular Edema,	IETE Zonal Seminar-cum-National Symposium Speech, Video & Image Processing & Applications, at IETE ,OU, Hyderabad	National	29th -30th March, 2014
14	Early detection of diabetic retinopathy from retinal fundus images using Eigen value analysis	IEEE International Conference on Control, Instrumentation, Communication and Computational Technologies, (ICCICCT-2015)", Kanya Kumari, Tamilnadu ,India.	International	18th-19th Dec2015
15	Classification of Diabetic maculopathy from Retinal images	International Conference on Inovations in Electrical,Electronics ,Power,Smartgrids& advanced computing Technology ,IEEPS-18	International	8th -9th Mar2018
16	Analysis of Retinal Blood Vessel Segmentation in different types of Diabetic	Retinopathy4th International Conference on Recent Challenges in Engineering and Technology -ICRCET-19, AITS ,Tirupaty	International	31st Jan-1st Feb 2019
17	Exudates and color analysis for the detection of Diabetic Macular Edema	IEEE 5th international conference for Convergence in Technology I2CT2019,Pune	International	29th -31st March2019
18	Prediction of severity of non proliferated diabetic retinopathy using machine learning	2nd International conference on recent Innovative trends in computer science and applications	International	25th-26th Oct 2019

19	A Review: Prediction of Multiple Adverse Health Conditions from Retinal Images	IEEE Bangalore Humanitarian Technology Conference (B-HTC) October 2020	International	8-10th Oct2020
20	IoT Based Alerting System for Respiration Disorders.	NSI42	National	28-29th Dec2020
21	Breast Masses classification using contour shape descriptors based on Beam Angle Statistics	3rd International Conference on Inventive Research in Computing Applications	International	2-3rd September 2021
22	TensorFlow object detection model for retinal vascular junction extraction	**2nd GCAT-2021**	International	1st- 3rd October 2021
23	Deep Learning Methods for the assessment iof vascular diameters for diabetic retinopathy screening,	**2nd GCAT-2021**	International	1st- 3rd October 2021
24	Retinal Vascular Network Segmentation using a concatenated CNN Architecture	International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON) Pune, India.	International	29th-30th October, 2021.
25	Classification of Retinal Vessel Tortuosity as Severity Grades using Random Forest Classifier	National Conference on Advances in Science, Agriculture, Environmental & Biotechnology, ISBN:978-93-90150-32-8Edn: 482, 2022	National	17th June 2022
26	Retinal Artery Vein Crossover Abnormality Classification using Optimized Machine Learning methods	National Conference on Advances in Electrical, Electronics & Computer Engineering, ISBN : 978-93-90150-31-1 Edn: 487, 2022.	National	18th June 2022

4.10.   Sponsored research Projects and Grants:

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
1.	Implementation of biomedical image processing on embedded hardware	UGC	2 years	3 lakhs	Completed
2.	Seminar Grant	AICTE	6 Months	1 Lakh	completed

4.11 Reviewer for the Journal-Informatics in Medicine Unlocked., Scientific Reports

5. **Awards / Honors received:**
   Teacher appreciation award, Sep 2022
   CMI level 5 award in leadership and management Sep 2021
   Appreciation award for the contribution as woman academic administrator ,March 2021.
   NPTEL discipline Star 2023.
6. **Patents published:2,granted:1,filed :1**
7. **Motto:**   To improve research environment in the department.