

Name of Faculty: Dr Uma Maheswari V

Designation: Associate Professor

Nature of Job/Appointment: Contract

Date of Joining: 16-02-2023

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Education Qualifications:	Name of the Degree	Class
Ph. D	Doctor of Philosophy (CSE)	Awarded
PG	M. Tech (CSE)	Distinction
UG	B.E. (Mechanical Engineering)	First Class

Work Experience:

Teaching	15 Years
Research	08 years
Industry	--
Others	--

Area of Specialization: Artificial Intelligence, Image Processing, Deep Learning, and Cloud Computing

Professional Memberships:

- Member IEEE, No.: 97227758
- Member EAI (European Alliance for Innovation).
- Member IAENG (International Association of Engineers).
- Member CSI (computer society of India) (2010001107)
- Life Member ISTE, No.: LM84563

Responsibilities held at Institution Level:

Responsibilities held at Department Level:

Research Guidance:

B. Tech projects -30  
M. Tech Projects -04

Awards Received:

- Best faculty of the year Award. Category: Best Faculty - Specific Innovations - manifest in prototypes, patents in the year 2019 from CSITechNEXT awards organized by IIT Bombay
- Received "Utama Adhyapika" award from the Bharat Excellence for the year 2022.

Courses Handled at Under Graduate / Post Graduate Level

- Programming in C, OOPS through Java, Data Structures, Advanced data structures, Artificial Intelligence, Computer Organization, Computer Networks, Digital Image processing, Distributed Systems, Digital Logic design, Data Communications and Computer Networks, Middleware Technologies,

No. of Papers Published

International Journals – 25

Projects Carried out

International Conference -05

Patents

1. Uma Maheswari, Rajanikanth aluvalu, Srikanth reddy, Venkateshwara reddy, Hanuman reddy Shoba Rani "student mood prediction in the digital classrooms using facial expression" published Indian Patent/ 201941018492 A
2. Uma Maheswari, g. varaprasad, Viswanatharaju, Rajanikanth aluvalu, m.a. jabbar, "24x7 patient monitoring in smart hospitals using facial expressions" published Indian Patent/ 201941011134 A
3. Dr. Rajanikanth aluvalu, Uma Maheswari V, Dr. m.a. jabbar, Dr. Sangeetha Gupta, Dr. Krishna Keerthi Ch, Dr. kmvv Prasad " smart city initiatives on secure public cloud using open hardware and software standards" application no: 202041008575 date of filing: March 2, 2020 .
4. Filed patent titled "smart advertisement system using image processing and deep learning" applied (application no. 201941024755).

Technology Transfer

Invited Speaker

1. Resource person for one-week FDP on "robotics in automation-trends

and case studies” organized by G.Pulla Reddy college of engineering Kurnool from 13-17 September 2021.

2. Resource person for four day Workshop on “Robotics process automation” by Vardhaman college of engineering under IEEE-RAS Society from 30st October to 3rd November 2021.
3. Resource person for AICTE-AQIS Sponsored STTP organized by school of engineering RK University on “Applications of Artificial Intelligence and Machine Learning” during 25th June 2021 to 26th June 2021.
4. Resource person for national level webinar on “digital image processing and computer vision” organized by karnatak arts science and commerce college, Bidar on 31st May 2021.
5. Speaker for webinar on “importance of RPA and its applications organized by IEEE Vardhaman SB on 31st march 2021.
6. Acted as Judge for Smart India Hackathon organized by AICTE for the year 2020.

No. of Books/Chapter  
Published with details

#### **Book Publications**

1. Editor for Text book “applications of visual AI and Image Processing published by De-Gruyter.
2. Author for Textbook “Career Guidance for Engineers “Published by Notion Press.

#### **Book Chapter Publications**

1. Uma Maheswari, V., Aluvalu, R. and Chennam, K.K., 2021. Application of machine learning algorithms for facial expression analysis. Mach. Learn. Sustain. Dev, 9, p.77.
2. Chennam, K.K., Uma Maheswari, V. and Aluvalu, R., 2021. Maintaining iot healthcare records using cloud storage. In IoT and IoE Driven Smart Cities (pp. 215-233). Cham: Springer International Publishing.
3. Aluvalu, R., Uma Maheswari, V., Chennam, K.K. and Shitharth, S., 2021. Data security in cloud computing using Abe-based access control. Architectural wireless networks solutions and security issues, pp.47-61.
4. Chennam, K.K., Mudrakola, S., Maheswari, V.U., Aluvalu, R. and Rao, K.G., 2022. Black Box Models for eXplainable Artificial Intelligence. In Explainable AI: Foundations, Methodologies and Applications (pp. 1-24). Cham: Springer International Publishing.

Details of Short-Term  
Training Programs/Faculty  
Development  
Programs/Seminars/Worksho  
ps/Conferences/Other  
Trainings (Attended and/or  
Organized).

#### **Conferences Organized**

1. Convener, CCPSAT – 2022, International Conference on Cyber Physical Systems and Assistive Technologies, KG Reddy College of Engineering, Hyderabad, India.
2. Program committee, ICMLSC 2018, International Conference on Machine learning and soft computing, June 21-22nd 2018, Vardhaman college of Engineering, Hyderabad, India.
3. Program committee, 11th world congress on nature and biologically inspired computing (NaBIC-2019).
4. Program committee, 11th international conference on soft computing and pattern recognition. (SoCPar-2019).

#### **Workshops Organized**

1. Organized 2-day workshop on “Python for ML and DL”, 21st and 22nd October, 2022.
2. Organized an IEEE Student branch – KGR CET inaugural on 3rd September 2022.
3. Organized TEDX VCE on 21st December 2019.
4. Organized TEDX VCE on 23rd June 2021.
5. Organized RAS Symposium funded by IEEE Hyderabad Section on 5th & 6th November 2021.
6. Organized workshop on “ Robotic Process Automation” in association with IEEE-RAS Society at Vardhaman college of Engineering, from 30th October to 3rd November 2021.
7. Organized faculty development program on High performance computing at Vardhaman College of engineering in 2019.
8. Organized faculty development program on Python programming at Vardhaman College of engineering in 2019 August 1st and 2nd.
9. Successfully Organized the College Annual Fest Ortus ‘15, Of Vardhaman College of Engineering from Department of Computer

Science Engineering.

10. Organized as chief of discipline committee member for techfest 'Technolites 2017' of Vardhaman College of Engineering from Department of Computer Science Engineering

#### Workshops/Seminars Attended

1. Attended one week workshop on "National Level Faculty Development program on Online teaching platform and Tools", organized by Government College for women, Bhagawathi Nagar, Jammu, during 26th – 30th, October, 2022.
2. Attended one week workshop on "Machine Learning and its Applications", organized by CVR College of Engineering, Telangana during 28th March – 1st April 2022.
3. Attended two-day workshop on "Deep Learning for Engineering Applications (DEA - 2019)", organized by computer centre, National Institute of Technology Warangal, Telangana, India during 25th – 26th February 2019, sponsored by TEQIP – III.
4. Attended a one-week workshop on "Research Methodology", from 26th February to 3rd March 2018, organised by VTU Human Resource Development Centre (VTU – HRDC), Centre for PG Studies, Muddenahalli, Chickaballapur (Dist).
5. Attended two-day workshop on "Data Analytics Using R", from 27th & 28th October, 2017, Vardhaman College of Engineering, CSE Dept.
6. Attended one-week FDP on "Artificial Intelligence and Machine Learning", 5th – 10th February 2018 Vardhaman College of Engineering, CSE Dept.
7. Attended 7 days Faculty Development Program on "FDP on IoT and Smart Applications, November 27 - December 1, 2017" at CVR college of Engineering, Ibrahimpatnam.
8. Attended 2 days Faculty Development Program on "Data Analytics with R Programming" at Vardhaman College of Engineering on 27th and 28th October, 2017.
9. Attended 2 days Faculty Development Program on "Research Scope and Directions in Modern ERA" at Vardhaman College of Engineering on 21st and 22nd September, 2017.
10. Participated a One-week Faculty Development Programme On "RESEARCH TRENDS IN COMPUTER SCIENCE & ENGINEERING" Organized by Department of Information Technology and Computer Science & Engineering at Vardhaman College Of Engineering, Hyderabad during 5th - 11th January, 2015.
11. Participated a One-week FDP on "Lecture Series on Computer Science Core Concepts" at Vardhaman College of Engineering, Hyderabad during 19th -25th November, 2014.
12. Attended a One-day seminar on "Multimedia Data Retrieval" at Vardhaman College of Engineering, Hyderabad on 11th November 2014.
13. Attended a One-day seminar on "New trends in big data" at Vasavi College of Engineering, Hyderabad on November 2014.
14. Attended 3 days conference International Conference on Computational Intelligence and Informatics-2016 (ICCI-2016) held on 28 th, 29 th and 30th of may.

#### Details of Journal Publications/ Conferences (National and International)

##### International/National Journals:

1. Aluvalu, R., Mudrakola, S., Kaladevi, A.C., Sandhya, M.V.S. and BHAT, C.R., 2023. The Novel Emergency Hospital Services for Patients using Digital Twins. *Microprocessors and Microsystems*, p.104794.
2. Kantipudi, M.P., Aluvalu, R. and Raisinghani, M.S., 2022. Insights on Implications of Cognitive Computing in Leveraging Online Education Systems. *International Journal of Online Pedagogy and Course Design (IJOPCD)*, 12(1), pp.1-16.
3. Maheswari, V. U., Aluvalu, R., Kantipudi, M. P., Chennam, K. K., Kotecha, K., & Saini, J. R. (2022). Driver Drowsiness Prediction Based on Multiple Aspects Using Image Processing Techniques. *IEEE Access*. [Indexed in SCI]
4. Maheswari, V. U., "Cervical cancer diagnosis using intelligent living behavior of artificial jellyfish



- optimized with artificial neural network". IEEE Access. [Indexed in SCI]
5. Maheswari, V. Uma, Golla Vara Prasad, and S. Viswanadha Raju. "Facial expression analysis using local directional stigma mean patterns and convolutional neural networks." International Journal of Knowledge-based and Intelligent Engineering Systems 25.1 (2021): 119-128.[web of science,ESCI,DBLP,Scopus]
  6. Maheswari, V. Uma, Golla Vara Prasad, and S. Viswanadha Raju,Accepted paper entitled "Local Double Directional Stride Maximum Patterns for Facial expression Retrieval" in international journal of Biometrics, [Indexed in Web of Science (free), Scopus (free), DBLP, ESCI, IET Inspec etc.]
  7. Maheswari, V. Uma Prasad, Golla Vara, and S. Viswanadha Raju. "A survey on local textural patterns for facial feature extraction." International Journal of Computer Vision and Image Processing (IJCVIP) 8.2 (2018): 1-26.[scopus]
  8. Kothi Laxman, R. R., Lathigara, A., Aluvalu, R., & Viswanadhula, U. M. (2022). PGWO-AVS-RDA: An intelligent optimization and clustering based load balancing model in cloud. Concurrency and Computation: Practice and Experience, 34(21), e7136.[SCI]
  9. Swapna, Mudrakola, Uma Maheswari Viswanadhula, Rajanikanth Aluvalu, VijayakumarVardharajan, and Ketan Kotecha. "Bio-Signals in Medical Applications and Challenges Using Artificial Intelligence." Journal of Sensor and Actuator Networks 11, no. 1 (2022): 17. [ESCI,Scopus]
  10. Chennam, K. K., Mudrakola, S., Maheswari, V. U., Aluvalu, R., & Rao, K. G. (2023). Black Box Models for eXplainable Artificial Intelligence. In Explainable AI: Foundations, Methodologies and Applications (pp. 1-24). Springer, Cham.
  11. Aluvalu, Rajanikanth, Uma Maheswari V "Pedagogies for Blended TLP." Journal of Engineering Education Transformations 35 (2021): 93-96.[scopus]
  12. Uma Maheswari, V., Rajanikanth Aluvalu, and Krishna Keerthi Chennam. "Application of machine learning algorithms for facial expression analysis." Machine Learning for Sustainable Development 9 (2021): 77. [Scopus]
  13. Maheswari, V. Uma, S. Viswanadha Raju, and K. Sridhar Reddy. "Local directional weighted threshold patterns (LDWTP) for facial expression recognition." 2019 Fifth International Conference on Image Information Processing (ICIIP). IEEE, 2019.[scopus]
  14. Priyanka, V., and V. Uma Maheswari. "Automated Glaucoma Detection Using Cup to Disk Ratio and Grey Level Co-occurrence Matrix." Machine Learning and Information Processing: Proceedings of ICMLIP 2020 1311 (2021): 425.[scopus]
  15. Uma Maheswari V, et al "Intelligent Travel Route Suggestion System Based on Pattern of Travel And Difficulties." IOP Conference Series: Materials Science and Engineering. Vol. 1042. No. 1. IOP Publishing, 2021.[scopus]
  16. Uma Maheswari V, et al. "A Novel and Secure Approach for Quantum Key Distribution in a Cloud Computing Environment." Intelligent Computing and Networking. Springer, Singapore, 2020. 271-283.[scopus]
  17. Aluvalu, Rajanikanth,Uma Maheswari V, KrishnaKeerthi chennam et al. "Data Security in Cloud Computing Using Abe-Based Access Control." Architectural Wireless Networks Solutions and Security Issues. Springer, Singapore, 2021. 47-61.[scopus]
  18. Chennam, Krishna Keerthi, Rajanikanth Aluvalu, and V. Uma Maheswari. "Data Encryption on Cloud Database Using Quantum Computing for Key Distribution." Machine Learning and Information Processing: Proceedings of ICMLIP 2020 1311 (2021): 309.[scopus]
  19. V.Uma Maheswari, Varaprasad Golla, S.Viswanadha Raju, "A Survey on Local Textural Patterns for Facial Feature Extraction", IGI Global International Journal of Civil Engineering and Technology (IJCIET), Vol 8, No.2, 2018 [scopus]
  20. V. Uma Maheswari, S. Shoba Rani, "E-BAZAAR INNOVATIONUSING IOT DEVICE INCLOUD SUBSCRIPTION MANAGEMENT", International Journal of Civil Engineering and Technology (IJCIET), Vol. 8, No. 8, August 2017, pp. 1155 – 1158. [scopus]
  21. V. Uma Maheswari, Dr. Premasudha B.G, Dr. S. ViswanadhaRaju, "Content based Image Retrieval using Local Patterns: A Survey", International Journal of Engineering Research & Technology (IJERT), Vol. 5, No. 10, October 2016.[scopus]
  22. Y Indu , V.Uma Maheswari, "Context Aware Similarity Measure Selection: Mining of Wearable Implantable Body Sensor Network Data with Logical Reasoning", "International Journal of Engineering and Technology (IJET)", e-ISSN : 0975-4024, Vol 8 No 2 Apr-May 2016.[scopus]
  23. V.Uma Maheswari, S.Anitha Reddy, "Mutual Authentication-robust user Authentication for Online Services", INTERNATIONAL JOURNAL OF COMPUTER SCIENCE & TECHNOLOGY, IJCST ISSN 0976-8491, Vol. 3, Issue 4, 2012.[scopus]
  24. V.Uma Maheswari, S.Anitha Reddy, "Reliable Computing Under Resources Constraints Policy", INTERNATIONAL JOURNAL OF COMPUTER SCIENCE & TECHNOLOGY, IJCST, ISSN 0976-8491, Vol. 3, Issue 4, 2012.[scopus].