



FACULTY PROFILE ON WEBSITE

Faculty Name	Dr USHA KC	
Academic Designation	ASSISTANT PROFESSOR	
Educational Qualification	B.Tech, M.Tech, Ph.D	
Experience in Teaching & Industry	11 years	
Date of Joining	11/08/2025	
Official Email ID	ushakc-cse@dsatm.edu.in	
Employee ID	180874	

Educational Details

- **PhD:** Specialization in Medical image analysis.
Thesis on "Brain pattern analysis for Alzheimer's classification using resting state functional Magnetic Resonance Imaging", 2025
- **MTech:** VLSI and Embedded systems, Bangalore Institute of Technology, 2011
- **B.E.:** Telecommunication Engineering , VTU 2007

Professional Experience

- Currently working as Assistant Professor at Dayananda Sagar Academy of technology and Management from Aug 2025 till date.
- Full time guest faculty, University Visvesvaraya College of Engineering, Nov 2020 – Aug 2024
- Automation Engineer, Lafiny technologies, Bengaluru, Sep 2017 - Oct 2020
- Guest Faculty, Department of Medical Electronics, B.M.S College of Engineering, Aug 2014- Nov 2014
- Guest Faculty, Department of Electronics and Communication Engineering, BIT, Feb 2014 – July 2014
- Design Engineer, Neural systems, Bengaluru. Jan 2012 - Dec 2013
- Lecturer in the Department of ECE, Vivekananda Institute of Technology, Aug 2007 – Aug 2008

Publications

1. **Regions and Sub-Regions Dysfunctions in Alzheimer's Disease During Rest**, Asian Journal of Medicine and Health, Vol. 18, No. 5, pp. 43–54, June 2020. DOI: <https://doi.org/10.9734/ajmah/2020/v18i530205>.
2. **Longitudinal Resting-State fMRI: A Comparative Study on Alzheimer's Disease vs. Normal Controls**, Arquivos de Neuro-Psiquiatria, Vol. 82, No. 7, 2024. DOI: <https://doi.org/10.1055/s-0044-1787761>

International Conferences:

1. **Dual-Space Binary Hyperdimensional Computing for Resource-Constrained Image Classification**, IEEE Conference Proceedings, 2025. IEEE Xplore: <https://ieeexplore.ieee.org/document/11603121>.
2. **Federated Learning-Driven Crop Disease Diagnosis Framework to Ensure Privacy-Preserving Predictive Modeling Across Distributed Agricultural Zones**, IEEE Conference Proceedings, 2025. Indexed in IEEE Xplore. Available at: <https://ieeexplore.ieee.org/document/11545115>.
3. **Exploring the Synergy of Quantum-Classical Integration in Machine Learning Algorithms**, IEEE Conference Proceedings, 2025. IEEE Xplore: <https://ieeexplore.ieee.org/document/11508098>

Faculty Development Activity/Workshops/Conferences

1. **March 26–28, 2013** – *Three-day Workshop on “Mathematical Morphology and Pattern Recognition”*, Indian Statistical Institute, Bangalore.
2. **May 15–16, 2013** – *Two-day Workshop on “Recent Advances in Machine Learning”*, Sri Jayachamarajendra College of Engineering, Mysore.
3. **November 20–21, 2013** – *Two-day Symposium “HORIZON 2020”*, B.M.S. College of Engineering, Bangalore.
4. **November 21, 2014** – *One-day Workshop on “Functional MRI: Seeking New Frontiers”*, NIMHANS, Bangalore.
5. **July 28–29, 2015** – *Two-day Conference on “Preventive and Predictive Health Care Technologies”*, B.M.S. College of Engineering, Bangalore.
6. **December 17–18, 2015** – *Two-day Workshop on “Brain Storm”*, Grenoble, France.
7. **May 13, 2020** – *Webinar on “Free MOOC to Complement Engineering Education”*, IEEE Bangalore Section.
8. **June 22, 2020** – *Webinar on “How to Write and Publish Research and Conference Papers Efficiently and Effectively Using TYPESET Research Studio”*, Department of RIT Central Library, Rajarambapu Institute of Technology, Maharashtra.
9. **August 7, 8 & 11, 2024** – *Three-day Workshop on “Generative AI”* – Designed and implemented a Retrieval-Augmented Generation (RAG) system leveraging Lang-Chain and Google Gemini to provide intelligent responses from a custom FAQ knowledge base. Integrated FAISS vector databases and Hugging-Face embeddings for efficient semantic retrieval from CSV document stores. The project was deployed using PyCharm and Streamlit, demonstrating proficiency in developing and operationalizing AI-powered applications.

Academic Activity

- Resource person for “A HANDS-ON WORKSHOP ON fMRI IMAGE ANALYSIS” 9 September 2022, BMS College Of Engineering.
- Resource person for technical seminar on “Research paper writing”, 27th October 2026, DSATM.

Contact Details

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Dayananda Sagar Academy of Technology & Management.
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