## Faculty Profile :

**Name** : Mr. Om Hemraj Jadhav

**Designation :** Assistant Professor

**Department :** AIML

**Qualification :** Master of Technology in CSE with specialization in Data Science and Engineering, Bachelor in Engineering in Computer Engineering

**Om Jadhav** is an AI Researcher, Developer, and Educator currently serving as an Assistant Professor in the Department of Artificial Intelligence and Machine Learning (AIML), School of Engineering, Dayananda Sagar University, Bengaluru, Karnataka, India. Prior to joining Dayananda Sagar University, he worked as a Teaching Assistant at the National Institute of Technology (NIT) Agartala, Tripura, India, where he contributed to laboratory instruction and academic support in the System Programming Lab, Software Engineering Lab, and Central Computing Lab. He also gained valuable industry experience as an AI/ML Intern at Labmentix EdTech Pvt. Ltd., working on real-world artificial intelligence and machine learning applications.

Om earned his Bachelor of Engineering in Computer Engineering from Terna Engineering College, affiliated with the University of Mumbai, Maharashtra, India. He subsequently pursued his Master of Technology (M.Tech.) in Computer Science and Engineering with a specialization in Data Science and Engineering at the National Institute of Technology Agartala, India.

During his postgraduate studies, he was actively involved in advanced research focusing on decentralized intelligent systems, machine intelligence networks, and distributed optimization. His M.Tech research investigated "Volatility-Adaptive Merit-Based Sortition for Performance Optimization in Decentralized Networks," proposing adaptive mechanisms that leverage time-series volatility modeling and intelligent node selection strategies to improve efficiency, scalability, and robustness in decentralized computing environments.

His research interests span Artificial Intelligence, Machine Learning, Deep Learning, Large Language Models (LLMs), Generative AI, Reinforcement Learning, Multi-Agent Systems, Distributed and Decentralized Networks, Natural Language Processing, Cloud Computing, MLOps, and Intelligent Decision-Making Systems. He is particularly interested in parameter-efficient adaptation techniques for foundation models, scalable AI infrastructure, and the intersection of machine intelligence with distributed systems.

Om has designed and developed several AI-driven solutions, including a Serverless Multi-Agent AI System for Automated GitHub Code Review. This project introduced an autonomous event-driven architecture capable of analyzing pull requests through specialized AI agents focused on security assessment, code quality evaluation, and documentation generation. The system leveraged modern cloud-native technologies including FastAPI, Docker, Google Cloud Run, Cloud Functions, Vertex AI,

Gemini models, Pub/Sub, and Firestore, achieving substantial reductions in code review turnaround time while improving defect detection capabilities.

As an educator, he teaches undergraduate engineering students through both theoretical and laboratory-based instruction in Artificial Intelligence, Machine Learning, Cloud Computing, and related computing disciplines. His academic philosophy emphasizes bridging theoretical foundations with hands-on engineering practice, enabling students to develop industry-relevant skills in emerging AI technologies.

His current work focuses on efficient Large Language Model adaptation, Parameter-Efficient Fine-Tuning (PEFT), Transformer-based learning systems, Multi-Agent AI architectures, cloud-native AI deployment, and intelligent autonomous systems capable of operating at scale. Through research, teaching, and applied engineering, he continues to contribute to the advancement of next-generation AI technologies and their real-world applications.

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