

OM GOVIND JHA

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EDUCATION

Indian Institute of Science (IISc)

M.Tech. in Robotics and Autonomous Systems

Bengaluru, India

2026 – 2028

Indian Institute of Science Education and Research (IISER)

B.S. in Computer Science and Engineering, Minor in Data Science; CPI: 8.72 / 10.0

Bhopal, India

2022 – 2026

TECHNICAL SKILLS

Languages & Systems: Python, C/C++, SQL, Bash, Git, Linux, Docker, CUDA, $\LaTeX$

ML Frameworks & Libs: PyTorch, Torchvision, Flower (Federated Learning), Hugging Face, OpenCV, YOLOv8, Scikit-learn, NumPy, Pandas, SHAP

Deep Learning & AI: Flow Matching, Generative Diffusion, Vision Transformers (ViT), Clustered Federated Pruning, Multi-Instance Learning, CNNs, BiLSTM

Math & Optimization: Convex Optimization, Optimal Transport, Statistical Inference (MLE, Hypothesis Testing), Game Theory

PUBLICATIONS & PREPRINTS

(* denotes primary / first author)

Modeling Affective Distress from Video: A Modality-Aware Multi-Branch Learning Approach | *ACM DL*

Accepted

Om Govind Jha*, N. K. Sahu, H. R. Lone. *Proceedings of 28th ACM International Conference on Multimodal Interaction (ICMI '26)*.

Teacher-Guided Discriminative Flow Matching for Latent Representation Learning | *NLDL 2027*

Accepted

Om Govind Jha*, M. Bamniya, A. Borthakur. *Northern Lights Deep Learning Conference (NLDL 2027)* – To Appear.

CA-AFP: Cluster-Aware Adaptive Federated Pruning for Heterogeneous FL | *CoDS-COMAD 2026*

Under Review

Om Govind Jha*, H. Shukla, H. R. Lone. *ACM IKDD Conference on Data Science and Management of Data (CoDS-COMAD 2026)*.

Predictive Modeling in ODI Cricket: Training Strategy, Feature Engineering, & Explainability

Under Review

Om Govind Jha*, K. Kandhway. *International Journal of Sports Science & Coaching (SAGE Publications)*.

RESEARCH EXPERIENCE

Research Intern | Supervisor: Dr. Ayon Borthakur [Accepted at NLDL 2027]

May 2025 – Mar 2026

Indian Institute of Technology (IIT) Guwahati

Guwahati, India

- Engineered a teacher-guided Discriminative Flow Matching (DFM) framework parameterizing conditional vector fields on ViT backbones.
- Formulated latent representation learning as linear probability paths between strongly augmented student and EMA teacher embeddings.
- Integrated adaptive scalar gating and velocity clipping; the feature regularization cuts ECE and boosts CIFAR-100 top-1 to 69.38%.

Research Intern | Supervisor: Dr. Kundan Kandhway [Under Review at SAGE IJSSC]

Nov 2024 – Mar 2025

Indian Institute of Science Education and Research (IISER) Bhopal

Bhopal, India

- Developed an end-to-end sports analytics pipeline over 1,394 international ODIs; engineered 11 dynamic metrics (Pressure Index, Target Deficit).
- Enforced a chronological expanding-window training strategy to eliminate temporal data leakage in real-world sports forecasting.
- Demonstrated hybrid strategy (Unified Inning for 1st; Over-Wise Switching for 2nd innings, 84.6% acc); applied SHAP feature attribution.

Summer Research Fellow | Supervisor: Dr. Rajesh Sundaresan

May 2024 – July 2024

Indian Institute of Science (IISc), Bengaluru

Bengaluru, India

- Formulated convex optimization frameworks using Fisher Information Matrices and Maximum Likelihood Estimation for budget-constrained serosurveys.
- Analyzed minimax game formulations for worst-case disease prevalence bounds and multi-group population test budget allocation.

PROJECTS

Modality-Aware Multi-Branch Learning for Video Distress Detection | *ACM ICMI '26 Paper*

Dec 2025 – May 2026

- Architected a dual-branch MIL pipeline routing high-variance Action Units to 1D CNNs and continuous pose/gaze dynamics to BiLSTMs.
- Integrated gated temporal attention and gradient-based spatial saliency, achieving 71.04% accuracy on clinical TSST benchmarks.

CA-AFP: Cluster-Aware Adaptive Federated Pruning for Heterogeneous FL | *Under review at CoDS-COMAD '26*

Aug 2025 – Feb 2026

- Designed a clustered dynamic sparse FL framework allowing client clusters to evolve specialized sparse topologies (70% budget).
- Clustered clients via trajectory cosine similarity; executed dynamic pruning and gradient regrowth on CIFAR-10/100, FEMNIST, WISDM.

ACHIEVEMENTS & RESPONSIBILITIES

Achievements: Presented research paper at ACM ICMI 2026 (Napoli, Italy); Reliance Foundation Scholar (2022–26); INSA-IASc-NASI Summer Fellow (2024); GATE DA Qualified (2025); JEE Advanced (2022); AIR 98 IMU-CET.

Responsibilities: Teaching Assistant, *Data Science in Practice* (Jan–May 2025); Coordinator, Economics Club, IISER Bhopal (2024–25).