

AKSHAY GOVIND SRINIVASAN

srinivasan.akshay2004@gmail.com

EDUCATION Department of Mechanical Engineering, Indian Institute of Technology, Madras
Bachelors in Mechanical Engineering 2022 - 2026 (expected)

- GPA: 9.69/10.00, Department Rank: 1/227
- Obtained Perfect 10 GPA in 3rd and 5th Semester
- Secured a JEE Rank of 1424 out of 1.5 Million Students across India

- PUBLICATIONS
1. Learning Where the Physics Is: Probabilistic Adaptive Sampling for Stiff PDEs *AI and PDE Workshop, International Conference on Learning Representations 2026 (Accepted)*
Advisor: Prof. Balaji Srinivasan, DSAI, IITM [Link for Paper](#)
 2. Training Free Memory for Long Horizon Task Improvements in Robotics, *SCALE@International Conference on Machine Learning 2026 (Under Review)*
Advisor: Dr. Manohar Kaul, Fujitsu Research
 3. Enhancing Financial RAG using Agentic AI and Multi-HyDE: A Novel Approach to Information Retrieval and Hallucination Reduction. *FinNLP Workshop, Empirical Methods in Natural Language Processing 2025, .* [Link for Paper](#)
 4. IndiCASA: A Dataset and Bias Evaluation Framework for LLMs Using Contrastive Embedding Similarity in the Indian Context. *Eighth AAAI/ACM Conference on AI, Ethics, and Society, 2025.*
Advisor: Prof. Balaraman Ravindran and Dr. Gokul S Krishnan [Link for Paper](#)
 5. Towards Sustainable Scientific Machine Learning: Fast and Interpretable PDE Solvers via RBF-PIELM, *International Conference on Data Science 2025 (Accepted, Oral)*
Advisor: Prof. Balaji Srinivasan, DSAI, IITM [Link for Preprint](#)
 6. Deep vs Shallow: Benchmarking Physics-Informed Neural Architectures on the Biharmonic Equation, *ML4PS Workshop at the conference on Neural Information Processing Systems (NeurIPS) 2025, .*
Advisor: Prof. Balaji Srinivasan, DSAI, IITM [Link for Paper](#)
 7. Gradient-Based Regularization for Inverse Airfoil Design *Physics of Fluids 2025 .*
Advisor: Prof. Nagabhushana Rao Vadlamani, AE, IITM [Link for Paper](#)
 8. Towards Fast Option Pricing PDE Solvers Powered by PIELM, *AI Meets Quantitative Finance, International Conference on AI in Finance 2025*
Advisor: Prof. Balaji Srinivasan, DSAI, IITM [Link for Paper](#)

- PROFESSIONAL EXPERIENCE
- Research Intern, Fujitsu Research of India** | Bangalore, India 2025.11 - 2026.02
- Developed training-free memory for Vision Language Action Models
 - Designed model-agnostic memory retrieval and conditioning algorithm for VLA
 - Improved long-horizon task performance upto 30% and increased model robustness
- Research Intern, Adobe Inc.** | Noida, India 2025.05 - 2025.08
- Developed Collaborative Multi-Agent Trainable Pipeline for Short Video Extraction
 - Created a Dataset and Benchmark, Modelling User Behaviour of Short Video
 - Developed Novel Preference Alignment Based Training Algorithms for RL based Mutli-modal training of VLM Agents
 - Optimized Reinforcement Learning based Training on over 3000 Hours of Video
- AI Engineering Intern, Sarvam.AI** | Chennai, India 2024.06 - 2024.07
- Developed Scalable Agentic Pipelines for Question Answering in Health Care
 - Developed Multi-Agent Systems for Human-like Conversation Data Generation
 - Conducted red teaming exercises against Data Poisoning
 - Delivered a Proof of Concept Pipeline to over 500 users

AWARDS AND PRIZES	<p>Mrs Jayashree Ananth Prize Awardee 2025 Presented at 66th Institute Day for Best Academic Record in Semester 3 and 4 04.2025</p> <p>Kiran Award for the year 2024 –“The Best Academic Student” Presented by Indian Society of Non-Destructive Testing 04.2025</p> <p>Sakura Science Program Fellow 2024 Among 150 Indian Students invited by Japanese Science and Technology Agency 09.2024</p>
PATENTS	<ol style="list-style-type: none"> 1. Akshay Govind Srinivasan, Ryan Jacob George et al. Systems and Methods for Agentic Based Approach in Retrieval Augmented Generation <i>Indian Patent Granted: 587461, 2025.</i> 2. Ruthwik Chivukula, Akshay Govind Srinivasan, et al. Gradient-based Regularisation for Inverse Design of Airfoils Using Deep Learning <i>Under Patent Filing Application Number: 202441093218, 2024.</i> 3. Sahil Girhepuje, Siva Sankar Sajeev, Akshay Govind Srinivasan et al. Data Generation Techniques for Tool-Based LLM Applications <i>Under Patent Filing Application Number: 202441079904, 2024.</i>
PROJECTS	<p>Physics Informed Extreme Learning Machines(PIELM) for Biharmonic Equation <i>Under guidance of Prof. Balaji Srinivasan, DSAI, IITM</i> 2025.06 - Ongoing</p> <ul style="list-style-type: none"> • Demonstrated PIELM as a fast and interpretable PDE solver for Biharmonic Equation. Reduced compute time by 350× and memory requirements by 13.2× compared to PINNs <p>Gradient-based Regularization for Inverse Design of Airfoils <i>Under guidance of Prof. Naghabushana Rao Vadlamani</i> 2025.02 - 2025.05</p> <ul style="list-style-type: none"> • Developed a gradient-based regularization for Airfoil Inverse Design using Deep Neural Network. Improved accuracy by 27% across practical flow conditions <p>GeoAwareGPT: Bringing Geo-Spatial Data closer to every Indian <i>Ranked Top 30 out of 3,464 teams Nationally at BAH 2024@NSRC, ISRO</i> 05.2024</p> <ul style="list-style-type: none"> • Built a multi-agent system to Empower Indian farmers with accessible geospatial AI for agriculture and placed Top 30 in the Bhartiya Antariksh Hacakathon conducted by Indian Space Research Organization
SKILLS	<p>Courses Taken: Computational Economics, Advanced Topics in AI, Modern Computer Vision, Reinforcement Learning, Foundations of Computational Fluid Dynamics, Foundations of Finite Element Analysis, Computational Heat and Fluid Flow, Control Systems, Automation in Manufacturing, Foundations of Fluid Dynamics.</p> <p>Programming: Python, C++, MATLAB, FORTRAN, BASH.</p>
VOLUNTEERING	<p>Led a team of 43 students in organizing E-Summit 2024 with a overall footfall of 10,000</p> <p>Led UDAAN Campaign to bring awareness to over 250k rural entrepreneurs in Tamil Nadu</p> <p>Organized 6 Large-scale competition with a combined participation around 16k.</p> <p>Organized Heal-Thy Campaign to bring awareness on Carbon Credits to Commoners.</p> <p>Founded and led the hackathon team, mentoring 60+ students in translating research into real-world products.</p>