

Tishha Agrawal

LinkedIn: Tishha Agrawal
Email id : tishhaa@iisc.ac.in
Mobile : +91-9589888732



EDUCATION

- Indian Institute of Science (IISc)** Bangalore, India
M.Tech in Computational and Data Sciences
Cumulative Performance Index (CPI): 7.7
2025 - present
- Bhilai Institute of Technology** Durg, Chhattisgarh, India
B.Tech in Computer Science and Engineering
Cumulative Performance Index (CPI): 7.91
2021 - 2025
- Delhi Public School** Durg, Chhattisgarh, India
Senior Secondary School Examination (Class XII, CBSE)
Percentage: 93.6%
May, 2020
- Delhi Public School** Durg, Chhattisgarh, India
Secondary School Examination (Class X, CBSE)
Percentage: 91.4%
May, 2018

EXPERIENCE

- Fujitsu Research India Pvt Ltd** Bangalore, India
HPC-AI Intern, MONAKA Team
May 2026 - Aug. 2026
Worked on improving the classification accuracy of lightweight edge models using **Knowledge Distillation (KD)**, with **CLIP** and **DINOv2** as teacher models and **MobileNet** and **ResNet-18** as student models.
Extended the **Custom-KD** framework proposed in prior CVPR work, experimenting with modifications to improve knowledge transfer from large vision models to resource-efficient student models.
Achieved a final classification accuracy of **59%**, compared with **52%** reported by the original approach, resulting in an improvement of **7 percentage points**.

ACHIEVEMENTS AND QUALIFICATION

- Secured **99.75 percentile** in **GATE 2025** (Computer Science and Engineering).
- Awarded the **Wells Fargo Women M.Tech. Fellowship** for academic excellence and research potential.

RESEARCH AREA

Vision-Language Models, Multimodal Learning, Model Robustness, and Machine Learning.

ACADEMIC PROJECTS

- LatentFlow.** Indian Institute of Science, Bangalore
Academic Project
Dec. 2025 - Jan. 2026
Implemented the Diffusion Transformer (DiT) architecture from scratch in PyTorch, replacing standard U-Net backbones with scalable Transformer blocks for generative tasks.
Architected a two-stage training workflow: first training a VAE for perceptual compression, followed by training the DiT on pre-cached latents to significantly reduce GPU computational overhead.
Achieved high-fidelity facial generation on the CelebHQ dataset, validating the efficacy of transformer-based diffusion over traditional CNN-based approaches.
- MoodWav.**
Academic Project
Oct. 2025 - Nov. 2025
Developed a web application for speech-based sentiment analysis, handling both live and pre-recorded audio.
Engineered significant features from audio signals and extracted them in numerical format to train various models including Decision Tree, Random Forest, LightGBM, CNN, and MLP.
Achieved **77% accuracy** on mood prediction using LightGBM.

- **WebMarker-Pro.**
Self-Initiated Project

Dec. 2025

Engineered a persistent annotation tool using JavaScript and Chrome Storage API to enable seamless, long-term highlighting for academic research.

Solved data-loss challenges by implementing XPath serialization to ensure highlights remain accurately pinned even after page refreshes.

Developed the tool as a self-initiated solution to streamline personal study workflows, prioritizing a privacy-first, “local-only” data architecture.

RELEVANT COURSEWORK

- **Postgraduate:** Natural Language Processing, Introduction to Data Science, Machine Learning for Data Science, Numerical Linear Algebra, Tensor Computation for Data Science, Introduction to Scalable Systems.
- **Undergraduate:** Data Structures and Algorithms, Computer Architecture, Operating Systems.

TECHNICAL SKILLS

- **Programming Languages :** Python, C
- **Libraries:** PyTorch, NumPy, Pandas, Matplotlib, Scikit-learn
- **Tools :** Git, GitHub, VS Code, Jupyter Notebook
- **Machine Learning :** Deep Learning, Transformers, Diffusion Models, Random Forest, LightGBM
- **Documentations :** Latex

EXTRA CURRICULAR ACTIVITIES

- **Placement Representative, IISc:** Contributed towards planning for the placement season 2025–26.
- **EECS Sports Meet Basketball Tournament:** Won a **Silver Medal** representing the Department of Computational and Data Sciences.
- **Public Relations Manager, TEDxBITD:** Contacted guests for talks, led the marketing team, and managed advertisements.