

Jeet Shah

Technical Researcher

jeetsh4h@gmail.com | jeetsh4h.dev | github.com/jeetsh4h | linkedin.com/in/jeetsh4h

Education

Columbia University

Sep 2026 – Expected graduation: 12/27

M.S. Computer Science, Network Systems Pathway · New York, NY
Current coursework: Networks for AI, Analysis of Algorithms.

FLAME University

Aug 2021 – May 2025

B.Sc. (Hons.) Computer Science; PG Diploma in Interdisciplinary Studies · Pune, India
CGPA: 8.9/10; merit scholarships covering 25% (2021–2024) and 60% (2024–2025) of tuition.
Selected completed coursework: Advanced Machine Learning, Applied Multivariate Statistics, Numerical Methods.

Research Experience

Centre for Interdisciplinary AI, FLAME University

Jan 2024 – May 2025

Research Assistant

- Co-developed ConvGRU, conditional-GAN, and ConvLSTM training pipelines and satellite-data ingestion tooling for precipitation nowcasting.
- Administered a multi-user GPU server: accounts, drivers, storage, and isolated training environments.

Space Applications Centre, ISRO

May 2023 – Aug 2023

Research Intern

- Developed ConvLSTM precipitation-nowcasting models with INSAT-3D satellite data in an air-gapped high-performance computing environment.

Selected Research Outputs

Weather4Cast, team kaubega: First on the 2024 core-challenge leaderboard; second in the 2025 cumulative-rainfall task.

INSAT-3D Precipitation Nowcasting

[Thesis & code](#)

- Built satellite-data caching, temporal-window generation, and ConvLSTM training/evaluation pipelines in Python, TensorFlow/Keras, OpenCV, and HDF5.
- Reduced six-hour forecast RMSE by 30.7% against a Lucas–Kanade optical-flow baseline; undergraduate thesis supervised by Kaushik Gopalan (2025).

Preprints and Presentations

- Co-author, [Computationally-efficient deep learning models for nowcasting of precipitation](#) (Weather4Cast 2025), arXiv:2511.11197. *Preprint*.
- Co-author, [A conditional Generative Adversarial network model for the Weather4Cast 2024 Challenge](#), arXiv:2412.00451. *Preprint*.
- Presented thesis-based nowcasting work at CVIP 2025, IIT Ropar, and earlier OLR/optical-flow work at the NCVPRIPG 2023 Student Research Symposium, IIT Jodhpur.

Research Software and Applied Engineering

Nilakan Programming Language

[Documentation & Playground](#)

- Implement Nilakan with Prajas Naik; language fundamentals designed by Prof. Aamod Sane.
- Implement the parser, static checks, interpreter, runtime diagnostics, CLI, documentation, and browser playground using TypeScript, Chevrotain, Monaco, and Playwright.

Voltek AI

Oct 2024 – Aug 2026

Software Engineer (Part-time)

- Built a battery-research assistant with internal-document retrieval, web search, citations, streamed responses, and chat history across four model providers.
- Redesigned PostgreSQL process storage; reduced observed material-query latency from 3–20 seconds to under 500 ms with indexed tables, transactional writes, and validated backfills.

Technical Skills

Languages: Python, TypeScript, C++, R, SQL, Rust.

ML and data: TensorFlow/Keras, PyTorch, NumPy, OpenCV, HDF5, ConvLSTM, ConvGRU, conditional GANs, variational autoencoders, retrieval-augmented generation.

Infrastructure: Linux, GPU-server administration, air-gapped HPC, Docker, Git, GitHub Actions.