

Jeet Shah

Quantitative Researcher

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Education

Columbia University

M.S. Computer Science, Network Systems Pathway · New York, NY

Sep 2026 – Expected Dec 2027

FLAME University

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.

Aug 2021 – May 2025

Research and Financial Experience

Centre for Interdisciplinary AI, FLAME University

Research Assistant

Jan 2024 – May 2025

- 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

Research Intern

May 2023 – Aug 2023

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

FLAME Mathematical Modelling Centre

Student Researcher

Oct 2022 – Apr 2023

- Implemented and evaluated genetic algorithms and variational autoencoders for synthetic sample generation in experiments on imbalanced classification and protein datasets.

Analyse India

Technical Intern

May 2022 – Aug 2022

- Built Python tools to collect and normalize Google Finance and Yahoo Finance data for National Stock Exchange-listed companies.
- Backtested trading strategies, calculated returns and technical indicators, and implemented candlestick-pattern detection and alerts in MetaStock.

Selected Modelling Work

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).

Algorithm Implementation and Evaluation

[Code](#)

- Benchmarked brute-force, Held–Karp, and nearest-neighbor algorithms; documented implementations and optimization iterations across 52 numbered [Project Euler problems](#).

Selected Research Outputs

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

- 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*.

Technical Skills and Quantitative Training

Programming: Python, R, C++, SQL, Rust; NumPy, TensorFlow/Keras, PyTorch, OpenCV, HDF5.

Methods: Forecast-error evaluation, optical-flow baselines, trading-strategy backtesting, genetic algorithms, variational autoencoders.

Coursework: Linear algebra, probability and statistics, statistics and optimisation for computing, numerical methods, applied multivariate statistics, advanced machine learning.

FLAME Investment Lab: Equity-analysis training in financial statements and ratios, valuation, and portfolio construction.