

Hrsh Venket

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Summary

AI Engineer with experience developing scalable pipelines, training deep learning models using Python, and building for real-world challenges. Demonstrated expertise through research contributions and hands-on work in large-scale data analysis. Seeking to leverage strong ML foundations and problem-solving skills to contribute effectively to deploying quality software.

Education

The Hong Kong University of Science and Technology Hong Kong, HKSAR, China Sep 2025 – Aug 2026
Master of Science, Artificial Intelligence

Ashoka University Sonipat, India Aug 2021 - Jun 2025
Postgraduate Diploma in Advanced Studies and Research, Advanced Major in Computer Science

- **Coursework:** Intro to Machine Learning, Computer Vision, Numerical Algorithms and Optimisation, Computer Graphics, Statistical Inference

APL Global School Chennai, India Jan 2017 - Jan 2021
A levels

Work Experience (Research and Internships)

Mphasis AI and Applied Tech Lab at Ashoka Aug 2023 - Jul 2025
Research Assistant

- Authored first-submitted paper while refining machine learning models on satellite time series data, incorporating Python-based ML libraries to enhance Indian forest fire classification accuracy by 9% over SoTA.
- Conducted large-scale data preprocessing and feature engineering for remote sensing datasets using advanced ML techniques, aligning with large-scale project methodologies.
- Presented a working paper at NASA SARI Conference 2024 to distinguished delegates including Nobel Laureate David Skole, and Dr. Krishna Vadrevu from NASA.

Tiger Analytics Pvt. Limited Oct 2024 - Dec 2024
Data Science Intern

- Designed and optimized Bayesian regression, additive, and multiplicative ML models using Python, reinforcing robust machine learning principles on large-scale data projects.
- Leveraged feature engineering, validation techniques, and numerical optimization to improve forecasting accuracy in market mix modeling, showcasing effective analytical and problem-solving abilities.

Ashoka University Aug 2023 - Dec 2024
Teaching Assistant (2 semesters)

- Assisted in CS-3410: Introduction to Machine Learning and CS-4912: Computer Vision courses, engaging 120+ students
- 50+ office hours, thereby reinforcing core ML and deep learning concepts.

Projects

Advanced TFT Analytics Tool Aug 2025 - Present

- Designed and deployed a web app with autoscaling on Google Cloud Platform, backed by BigQuery for large-scale data processing.
- Built an automated autoscaling ETL pipeline from scratch to ensure seamless, reliable integration of incoming data.

Multi-Agent Orchestration for Creative Poster Generation Sep 2025 – Nov 2025

- Worked with Langgraph and Openrouter to orchestrate agents towards creative poster generation
- Built in logging and wrote modular tests for each part of the orchestration pipeline

Capstone Project: Predicting Forest Fire spread in Central India Aug 2024 - Dec 2024

- Replicated DiffusionSat (Diffusion model specific to Satellite Data) to predict forest fire spread in central India
- Applied Monte Carlo Methods and to predict forest fire spread.

3D Reconstruction of C Elegans Jan 2024 - May 2024

- Built a Computer Vision pipeline that involved image processing, 3D reconstruction and visualisation of (microscopic roundworm) C. Elegans from SDCM images.

Electricity Load Forecasting Machine Learning Competition Jan 2024 - May 2024

- Applied gradient boosted trees and time series encoding techniques for large-scale electricity load forecasting.
- Achieved 24th out of 195 teams

Technical Skills

- **Programming & Domains:** Python, C/C++, PyTorch, TensorFlow, OpenCV, Computer Vision, Machine Learning, Deep Learning, Remote Sensing, Time Series Analysis, Numerical Optimization, Image Processing, Algorithms, Data Structures, Statistics, Natural Language Processing, LangGraph, RESTful APIs, Numpy, Scipy, Matplotlib, OpenCV, LangGraph
- **Platforms:** Google Cloud Platform, BigQuery, Unix/Linux, Riot Developer API, Docker, Google Earth Engine

Leadership

Ashoka University Aug 2024 - May 2025
Captain of Men's Volleyball Team

- Rebuilt squad after half of the team graduated, Captained 18 players over 9 tournaments.

Ashoka University Jan 2023 - Jan 2024
President of Eesho (the Board Gaming Society)

- Managed a team of 50 across 6 departments, doubled membership, organised 20+ campus events
- Won award for contributions to campus life

APL Global School Jul 2020 - Jun 2021
School Pupil Leader

APL Global School Jul 2020 - Jun 2021
Secretary General of APL MUN

Certifications

Trinity Grade 8 Theatre Distinction May 2020

Krav Maga P1 Feb 2020