AKSHAY SURESH

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Applied scientist with background in machine learning for science research and expertise in best practices Python coding for agile software development.

WORK EXPERIENCE

Machine Learning Researcher / Engineer, Treefera 07/2025 – Present
Geospatial Artificial Intelligence for Forest Carbon Quantification

- **Integrated an open-source geospatial foundation model** into the company tech stack, scaling operations from local scope to global coverage in 8 weeks.
- Built a software toolkit shared across company projects, shortening initial development time by 25% per project.

Data Science Fellow, Faculty AI 05/2025 – 07/2025
Next-level Hiring: LLM-powered CV Analysis & Candidate Ranking

- **Implemented a retrieval-augmented framework for granular skill evaluation and scalable candidate feedback generation**, cutting recruitment costs by up to 30% per new hire.
- Deployed Python services via FastAPI endpoints, accelerating CV screening from several days to a few hours and boosting hiring efficiency.

Freelance Applied Scientist 01/2024 – 04/2025
Computer Vision and Remote Sensing for Positive Human and Climate Impact

- **Led test-driven development of a segmentation model** to enable automated monitoring of Amazon rainforest cover in satellite imagery, eliminating up to 15 hours of tedious manual processing per week.
- Delivered technical consultancy to an early-stage startup building a data-as-a-service platform, empowering consumers to save up to 15% on their monthly electricity bills through tailored recommendations.

Graduate Researcher, Cornell University 08/2017 – 08/2023
Signal Processing for Automated Astrophysical Event Discovery

- **Engineered an automated, memory-efficient pipeline for parallel processing of 10 TB of data** at speeds surpassing 500 GB/hr on supercomputing platforms.
- Developed a novel open-source software to enable the first searches for radar-like transmissions from about 600,000 planetary systems in the Milky Way.

Machine Learning Researcher, Frontier Development Lab USA 06/2022 – 08/2022
Time Series Forecast of Rates of Induced Earthquakes from Underground Carbon Storage

- Reduced location-specific data modeling time from 22 hours to 3 minutes using numerical computing best practices, efficient optimizers, and dimensionality reduction methods.

TECHNICAL SKILLS

Programming Languages	Python, bash scripting, LaTeX, SQL
Python Libraries	PyTorch, NumPy, SciPy, Scikit-learn, Matplotlib, Xarray, Dask
Software Engineering	Production code development, CI/CD
Quantitative Skills	Machine learning, numerical analysis, probability and statistics, signal processing

EDUCATION

MS & PhD (Astronomy & Physics), Cornell University, USA 08/2023
BS & MS (Physics & Mathematics) Dual Degree with Institute Gold Medal, IISER Pune, India 05/2017

Additional Relevant Certifications:
NPTEL Online Certification (Elite + Gold), Reinforcement Learning 11/2024