## **AKSHAY SURESH**

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Data scientist with 7 years of experience in best practices Python coding for agile software development. Played a pivotal role in designing reproducible machine learning codebases with significant industry impacts. Passionate about building innovative software solutions to address complex real-world problems and deliver sustainable benefits for businesses and society.

## WORK EXPERIENCE

01/2024 - Present **Freelance Applied Scientist** Artificial Intelligence for Positive Human and Climate Impact · Orchestrated test-driven software development of a segmentation model to detect Amazon rainforest cover in satellite imagery with a 97% true positive rate. 🗹 • Evaluated rooftop solar viability through LiDAR analysis for 996 Florida buildings, projecting that 53% could secure annual profits exceeding \$1,000 upon transitioning to solar-powered homes. 🗹 • Delivered technical consultancy to an early-stage startup building a data-as-a-service platform, empowering consumers to reduce their monthly electricity bills by up to 15% through tailored recommendations. **Relevant Certifications:** Machine Learning Engineer, AI for Wildfire Spread Prediction in Uttarakhand, India 🗗 03/2025 Advanced GIS and Remote Sensing, GIS Vision India 🗹 05/2024 Graduate Researcher, Cornell University 08/2017 - 08/2023 Enabling 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 novel open-source software to enable the first searches for radar-like transmissions from about 600,000 planetary systems in the Milky Way. 🕑 • Trained a deep neural network from scratch to classify and flag 95% of interference signals in noisy data, thus minimizing human input in large-scale data processing. Machine Learning Researcher, Frontier Development Lab USA 06/2022 - 08/2022Time Series Forecast of Rates of Induced Earthquakes from Underground Carbon Storage · Integrated physics-based constraints into temporal convolutional networks for 70% accurate earthquake forecasts, aiding in safe climate change mitigation efforts. 🗹 • Reduced location-specific data modeling time from 22 hours to 3 minutes using numerical computing best practices, efficient optimizers, and dimensionality reduction methods. • Expanded accessibility of code operation from an estimated 10,000 seismologists to over 5 million individuals with basic computing skills. **TECHNICAL SKILLS** 

Computer Languages	Python, bash scripting, LaTeX, HTML, SQL
Python Libraries	NumPy, SciPy, PyTorch, Scikit-learn, Matplotlib, GeoPandas, Xarray, Rasterio
Cloud Computing	Amazon Web Services (AWS), Google Cloud Platform (GCP)
Software Engineering	Production code development, Weights & Biases, CircleCI (for CI/CD), Dagster
Geospatial Software	ArcGIS Pro, QGIS
Quantitative Skills	Machine learning, numerical analysis, probability and statistics, signal processing

## **EDUCATION**