

Shreelekha Revankar

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EDUCATION

Cornell University, Ithaca, NY <i>Ph.D. in Computer Science</i> Advised by Prof. Kavita Bala and Prof. Bharath Hariharan	2023 - Present
University of Maryland, College Park, MD <i>M.S. in Computer Science</i> Advised by Prof. Ming Lin as part of the combined BS/MS program	2021 - 2022
University of Maryland, College Park, MD <i>B.S. in Computer Science</i>	2017 - 2021

RESEARCH INTERESTS

Developing scalable representation learning and multi-modal reasoning techniques for unstructured data, with a specific focus on Earth observation.

SELECTED PUBLICATIONS

- Revankar, S., Klassen, M., Hoover, A., Levit, C., Bala, K., Hariharan, B.** "Needle in Petabyte Sized Haystack: Event Prediction and Retrieval at a Global Scale" - *In Progress*
- Revankar, S., Phoo, C.P., Mall, U., Hariharan, B., Bala, K.** "Scale-Aware Recognition in Satellite Images under Resource Constraints" - *ICLR 2025*
- Revankar, S., Phoo, C.P., Mall, U., Bala, K., Hariharan, B.** "MONITRS: Multimodal Observations of Natural Incidents Through Remote Sensing" - *NeurIPS Datasets & Benchmarks 2025* (Spotlight, Top 2.8%)
- Kao, C.H., Zhao, W., **Revankar, S.**, et al. "Towards LLM Agents for Earth Observation" - *ARR 2026* (Submitted)
- Zheng, L.Y., Wei, W., Wu, T., Clements, J., **Revankar, S.**, Harrison, A., Shen, Y., Lin, M. "Adaptive Sensitivity Analysis for Robust Augmentation against Natural Corruptions in Image Segmentation" - *ICML 2025*

WORK EXPERIENCE

Planet Labs - AI/ML Research Engineer <i>San Francisco, CA</i>	2025 - Present
- Built search and retrieval features for PlanetView, a satellite imagery MLLM: semantic search, change detection and event retrieval, and automatic relevance feedback	
- Integrated Earth observation data skills enabling real-time queries across several data sources (FIRMS fire data, USGS earthquakes, FEMA disasters, NOAA tides, GDACS global alerts, and others)	
Planet Labs - AI/ML Research Intern <i>San Francisco, CA</i>	2024
- Internship led to full-time offer and Planet Labs PhD Fellowship (second recipient of Planet's full PhD funding)	
Shield AI - Behavior Engineering Intern <i>Rosslyn, VA</i>	2023
- Developed novel search and relocation algorithms enabling coordinated swarm behavior in aerial vehicles without inter-vehicle communication, allowing for hivemind-like operations through decentralized local rules	
Bowers CIS Research - Graduate Research Mentor <i>Ithaca, NY</i>	2024 - 2025
- Mentored two undergraduates (now pursuing PhD at USC and MS at Stanford) on a vision-language foundation model for satellite imagery analysis	

HONORS & INVITED TALKS

- Planet Labs PhD Fellowship - Second recipient of Planet's full PhD funding 2025 - Present
- NeurIPS Datasets & Benchmarks 2025 Spotlight - Top 2.8% of 1,995 submissions 2025
- Invited Talk: "Intelligent Selection of Resolution for Recognition" - AI Climate Institute 2024
- Outstanding TA Award, nominated by Prof. Anne Bracy 2024

SERVICE

- Invited Conference Reviewer: CVPR 2026, ICML 2026, ECCV 2026 2025 - Present
- Judge, Cornell Undergraduate Research Board Spring Symposium 2024
- Graduate Mentor, Software-defined Network Interface (SONIC) Workshop 2024

TEACHING

- Graduate TA, Cornell University: CS 1110 Introduction to Computing in Python 2023 - 2024

SKILLS

Programming: Python, Java, C++, Kotlin, Ruby, OCaml, C

Technical: Deep Learning, Computer Vision, Geospatial Computing, NLP, Remote Sensing, Multi-Modal Learning

Tools: PyTorch, TensorFlow, Google Earth Engine, GDAL, BigQuery, Git