Shreelekha Revankar

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Education

Cornell University, Ithaca, NY — *Ph.D. in Computer Science* 2023 – Present
Advised by Prof. Kavita Bala and Prof. Bharath Hariharan

University of Maryland, College Park — *M.S. in Computer Science* 2021 – 2022
Combined BS/MS program, advised by Prof. Ming Lin

University of Maryland, College Park — *B.S. in Computer Science* 2017 – 2021

Research Interests

Scalable representation learning and multi-modal reasoning for unstructured data, with focus on Earth observation.

Selected Publications

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

Experience

Planet Labs — AI/ML Research Engineer 2025 – Present
- Built search and retrieval for PlanetView (satellite imagery MLLM): semantic search, change detection, event retrieval, automatic relevance feedback
- Integrated Earth observation data skills: FIRMS fire data, USGS earthquakes, FEMA disasters, NOAA tides, GDACS alerts

Planet Labs — AI/ML Research Intern 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 2023
- Developed search and relocation algorithms for coordinated swarm behavior in aerial vehicles without inter-vehicle communication

Cornell Bowers CIS — Graduate Research Mentor 2024 – 2025
- Mentored two undergraduates (now PhD @ USC, MS @ Stanford) on vision-language foundation models for satellite imagery

Honors & Invited Talks

Planet Labs PhD Fellowship — Second recipient of Planet's full PhD funding 2025 – Present
NeurIPS D&B 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 Reviewer — CVPR, ICML, 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 CS 1110: Introduction to Computing in Python 2023 – 2024

Skills

Languages: Python, C++, Java, Kotlin, Ruby, OCaml **AI:** MCP Servers, Agentic Workflows, LLM Agents, RAG Systems **Misc:** Google Earth Engine, Geospattic Computation, BigQuery, Spanner, Firebase