

MATTHEW TRALKA

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EXPERIENCE

Senior Software Engineer

Planet Labs

Jul. 2022 - present

San Francisco, CA

- Spearheaded the planning and execution of the Pelican High Performance Pipeline's distributed architecture, enabling system scalability and performance metrics
- Led Simulated Imagery initiatives for Pelican Pipeline, focusing on exceeding deliverable quality standards and boosting operational efficiency.
- Orchestrated the Disaster Recovery Process for 8PB of SkySat data, ensuring stringent ISO27001 compliance and data integrity.
- Expertise in Python, C++, Kubernetes, Dask, Event Driven Architecture, Distributed Systems, and Image Processing.

Technical Lead

EASIER Data

Dec. 2020 - Jul. 2022

Remote, USA

- Co-founder and technical strategist during MM+ funding round aimed to accelerate distributed data storage and retrieval capabilities.
- Managed and optimized 300TB+ geospatial ETL pipelines, ensuring robust data handling and process efficiency.
- Innovated context-aware cold storage cache and retrieval systems, optimizing algorithms for speed and reliability.

Software Engineer

Spatial Multiscale Analytical Science Hub @ University of Maryland

Jan. 2021 - Jul. 2022

Remote, USA

- Engineered novel interactive visualization techniques for Multiscale Geographically Weighted Regression (MGWR)
- Developed a real-time interactive geospatial flow analytics dashboard, providing critical insights to policy-makers and researchers.

Research Software Engineer

University of Maryland

Aug. 2020 - Jul. 2022

College Park, MD

- Enhanced image processing workflows by 700%, significantly advancing the IARPAs Space-based Machine Automated Recognition Technique (SMART) program.
- Led a team of 4 engineers in pioneering a hybrid, context-aware cloud detection system as part of a cross-university consortium.
- Developed and optimized FMask 4.3 workflows, significantly improving large-scale cloud detection efficiency and accuracy.

EDUCATION

MS. Business Administration, Western Governors University

Sept. 2023

BS. Geographic Information Science: Geospatial Data Science, University of Maryland

Dec. 2021

Minor in Remote Sensing of Environmental Change

SKILLS

Languages

Python, Cython, Typescript, C++

Tooling

Git, Docker, Kubernetes, GCP, AWS, Jenkins

Domains

Remote sensing, image processing, distributing computing, HPC, data pipelines