

Lucas Johnson

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Work Experience

Research Assistant

Syracuse, NY

Climate and Applied Forest Research Institute

August 2019 - Present

- Developed a forest carbon mapping and monitoring system for the New York State Department of Environmental Conservation in support of net-zero emissions goals defined under the Climate Leadership and Community Protection Act
- Contributed writing, code, and statistical/spatial analysis to technical reports for state agencies and external collaborators
- Implemented R workflows to process, clean, and ingest > 30 TB of LiDAR point clouds and nearly 2 TB of Landsat imagery and derived indices
- Established cloud computing infrastructure (AWS), geospatial databases, and data sharing software
- Provided mentorship and technical support to grad students

Data Engineer

Boston, MA

Lightkeeper, LLC

August 2017 - July 2019

- Refactored ETL pipeline, establishing best practices and standard tools for customer-specific scripts
- Designed and developed internal tools to track feature usage and identify computational bottlenecks
- Implemented slack integrations to streamline requests from client support team
- Supervised and mentored a summer intern, providing project support and oversight to ensure success

Volunteer Positions

Technical Lead: Courtbot project

Remote

Code for Burlington

July 2020 - July 2021

- A free service providing text message notifications for court appearances

Workshop Assistant

Syracuse, NY

Foundations of Scientific Computing

December 2022, 2023

Education

Doctor of Philosophy in Environmental Science

Syracuse, NY

SUNY College of Environmental Science and Forestry

August 2019 - Present

- Dissertation: A Forest Carbon Monitoring System for New York State

Bachelor of Science in Computer Science

Medford, MA

Tufts University

August 2013 - May 2017

Skills

Programming languages: R, Python, SQL, and Linux shell languages.

GIS: QGIS, ArcGIS, GDAL, Google Earth Engine, R spatial ecosystem.