

# Lucas Johnson, Ph.D.

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## Work Experience

### Postdoctoral Scholar

Riverdale, UT

Oregon State University

August 2024 - Present

- Developed a shiny-live web map to support the joint consideration of carbon benefits and albedo offsets in tree-planting projects across the conterminous United States
- Decomposing Nepal-wide forest carbon trends with NASA GEDI data to distribute REDD+ payments

### Research Assistant

Syracuse, NY

Climate and Applied Forest Research Institute

August 2019 - August 2024

- Developed a forest carbon mapping framework for the NYS DEC supporting net-zero emissions goals
- Communicated research findings in 4 scientific manuscripts and 8 conference presentations
- Contributed writing, code, and statistical/spatial analysis to technical reports for external collaborators
- Implemented R workflows to process > 30 TB of LiDAR point clouds and 2 TB of Landsat imagery
- 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

## Education

### Doctor of Philosophy in Environmental Science

Syracuse, NY

SUNY College of Environmental Science and Forestry

August 2019 - May 2024

### Bachelor of Science in Computer Science

Medford, MA

Tufts University

August 2013 - May 2017

## Volunteer Positions

### Technical Lead: Courtbot project

Remote

Code for Burlington

July 2020 - July 2021

### Workshop Assistant

Syracuse, NY

Foundations of Scientific Computing

December 2022, 2023

## Skills

**Programming:** R, Python, SQL, git, AWS, and Linux shell languages.

**GIS:** QGIS, ArcGIS, GDAL/OGR, PostGIS, Google Earth Engine, and the R spatial ecosystem.