Lucas Johnson, Ph.D.

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Work Experience

Postdoctoral Scholar **Riverdale, UT**
Oregon State University *August 2024 - Present*
- Developed an interactive web map to support the joint consideration of carbon benefits and albedo offsets in tree-planting projects across the conterminous United States
- Building tools for equitable distribution of REDD+ payments using NASA GEDI data and ML
- Supporting rapid assessment of salvagable timber resources following natural disasters

Research Assistant **Syracuse, NY**
Climate and Applied Forest Research Institute *August 2019 - August 2024*
- Developed an ML-based forest carbon mapping framework for the NYS DEC
- Communicated research findings in 4 scientific manuscripts and 8 conference presentations
- Contributed writing, code, and statistical/spatial analysis to technical reports
- 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

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.