

Lucas Johnson, Ph.D.

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Work Experience

Postdoctoral Scholar <i>Oregon State University</i>	Riverdale, UT <i>August 2024 - Present</i>
○ 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	
Research Assistant <i>Climate and Applied Forest Research Institute</i>	Syracuse, NY <i>August 2019 - August 2024</i>
○ 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 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 <i>Lightkeeper, LLC</i>	Boston, MA <i>August 2017 - July 2019</i>
○ 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 <i>SUNY College of Environmental Science and Forestry</i>	Syracuse, NY <i>August 2019 - May 2024</i>
Bachelor of Science in Computer Science <i>Tufts University</i>	Medford, MA <i>August 2013 - May 2017</i>

Volunteer Positions

Technical Lead: Courtbot project <i>Code for Burlington</i>	Remote <i>July 2020 - July 2021</i>
Workshop Assistant <i>Foundations of Scientific Computing</i>	Syracuse, NY <i>December 2022, 2023</i>

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.