

# Lucas Johnson

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## Work Experience

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### 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

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### 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

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### 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

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

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