

# Zachery Slocum

zachery.slocum@gmail.com

linkedin.com/in/zslocum/

Geospatial Data Scientist & Developer | Ph.D. Candidate focusing on Web GIS, AI, & HPC

## EDUCATION

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*University of North Carolina at Charlotte*

*Charlotte, NC*

**Doctor of Philosophy (Ph.D.) in Geography**

*01/2020 – Present*

- Dissertation: Irregular Spatiotemporal Cluster Detection

**Master of Arts (MA) in Geography**

*01/2018 – 12/2019*

- Thesis: Integration of Web GIS with High-Performance Computing

**Bachelor of Arts (BA) in Computer Science**

*08/2013 – 12/2017*

- Concentration: IT, Minor: Geographic Information Systems

## EXPERIENCE

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**Geoinformatics Research Scientist**

*07/2018 – 05/2025*

*Center for Applied Geographic Information Science, UNC Charlotte*

- Analyzed diverse spatial datasets (utility infrastructure, public health) to identify critical interaction points and inform institutional and public safety strategies.
- Engineered an offline well permitting application to streamline data collection.
- Developed a public-facing web map to visualize critical COVID-19 wastewater data.
- Applied deep learning in Python to automate road object and pavement quality detection.
- Administered key research computing platforms (ArcGIS Enterprise, Linux, HPC)
- Mentored graduate and undergraduate students in advanced GIS and programming.

**Full-Stack Web Developer**

*09/2019 – 01/2020*

*AutoBrokers Ltd., Concord, NC*

- Engineered a comprehensive vehicle inventory system, pages for customer testimonials, and a back-end interface for seamless content management.
- Developed a new corporate website, migrating from Drupal to a custom PHP and MySQL solution with a modern Bootstrap front-end.

**IT Support Technician**

*05/2014 – 08/2018*

*Belk College of Business, UNC Charlotte*

- Provided comprehensive IT support for 200+ faculty and staff while mentoring other student technicians.
- Administered and maintained Linux servers and virtual LAMP stacks, implementing security updates and audits to mitigate critical vulnerabilities.
- Developed, maintained, and secured internal web applications using HTML, CSS, PHP, and SQL, improving data integrity through rigorous quality assurance testing.
- Created technical documents standardized design templates, and signage for events, college administration, and facilities operations.