

# Rob Hendrickson

**Websites:**  
[Digital Portfolio](#)  
[LinkedIn](#)

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**Objective:**  
An instructing position in  
geographic information science.

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**Education:** **Master of Geographic Information Science** May 2023  
University of Minnesota - Twin Cities, Minneapolis, MN  
*Notable Coursework:* GIS in Environmental Science and Management, Urban GIS,  
ArcGIS I & II, Data Visualization, Spatial Database Design,  
Numerical Spatial Analysis, Research Problems in GIS

**Bachelor of Science, Mathematics** May 2017  
University of Minnesota - Twin Cities, Minneapolis, MN  
*Notable Coursework:* Mathematical Analysis of Biological Networks,  
Dynamical Systems and Chaos, Mathematical Modeling,  
Environmental Biology, Environmental Physics, Ecology

## Teaching

**Experience:** **Principles of Geocomputing (Teaching Assistant)** Jan - May 2023  
University of Minnesota - Twin Cities, Minneapolis, MN

- Graded lab assignments, weekly activities, exams, and projects for over 50 students
- Guest lectured and hosted student support hours twice a week
- Corresponded regularly with students, professor, and technical support professionals

**Numerical Spatial Analysis (Teaching Assistant)** Jan - Dec 2022  
University of Minnesota - Twin Cities, Minneapolis, MN

- Led the weekly computer lab and discussion section of the course
- Co-designed 10 weeks of lab assignments, code demonstrations, and class discussions
- Guest lectured, provided feedback on assignments, and hosted student support hours

**Mapping Our World (Teaching Assistant)** Sept - Dec 2021  
University of Minnesota - Twin Cities, Minneapolis, MN

- Graded assignments, exams, and projects for 50 students
- Answered emails and chat questions

**Math Enrichment Tutor** Aug 2019 - June 2021  
Minnesota Math Corps, Minneapolis, MN

- Developed and maintained a weekly tutoring schedule for 15 students aged 9 - 15
- Implemented prescribed math interventions and assessed students' progress
- Documented daily activity and corresponded with various coaches

## Research

**Experience:** **Independent Researcher (GIS 8990)** Jan - May 2023  
University of Minnesota - Twin Cities, Minneapolis, MN

- Explored scaling relationships between human mobility and transportation sector carbon outflow at various spatio-temporal resolutions
- Cleaned and aggregated terabytes of mobile device trajectories and carbon emissions
- Presented research at the 2023 AAG Conference in Denver

## Research

- Experience:** **Research Assistant (GeoDI Lab)** June - Aug 2022  
University of Minnesota - Twin Cities, Minneapolis, MN
- Managed big data input and output of mobile device trajectories
  - Conducted exploratory spatial network analysis and community detection
  - Created various maps and data visualizations to primary investigator's specifications
- Undergraduate Researcher in Mathematical Ecology** May - August 2016  
University of Wisconsin - La Crosse, La Crosse, WI
- Co-developed and simulated a mathematical model to determine ecologically-sound methods to eradicate Schistosoma parasites that cause Swimmers' Itch
  - Extensively read literature to become familiar with the ecology of Swimmer's Itch
  - Collected and dissected snails, analyzed their gonads under a microscope, and recorded data to determine parasite prevalence in nearby bodies of water
  - Presented results at 2017 Joint Mathematics Meeting in Atlanta

## Presentations:

- "Exploring the Scaling Relationships between Human Mobility and Air Pollutants in the Twin Cities,"  
American Association of Geographers Annual Meeting, Oral Presentation. Denver, CO, Mar 2023
- "Mathematical Model of Swimmer's Itch with Praziquantel Treatment,"  
Joint Mathematics Meeting, Undergraduate Poster Session. Atlanta, GA, Jan 2017
- "Mathematical Model of Swimmer's Itch with Praziquantel Treatment,"  
Summer Celebration of Undergraduate Research, Poster Session. La Crosse, WI, Aug 2016

## Professional

- Experience:** **Independent Contractor** Jan 2024 - Apr 2024  
City of Minneapolis Health Department, Minneapolis, MN
- Co-developing a project to create a real-time, hyper-local text alert and reporting system for poor air quality events in Minneapolis
  - Coordinating with various stakeholders including government officials and employees, researchers, non-profits, community organizations, and residents
  - Consistently contributing to and managing the open-source project on GitHub
- Southside Green Zone Councilmember** July 2022 - Present  
City of Minneapolis, Minneapolis, MN
- Volunteer, appointed position in the City of Minneapolis focused on environmental justice issues, including pollution and racial & economic marginalization
  - Advise city council, staff, and departments on policies and decisions
  - Engage and collaborate with neighbors, organizations, and other stakeholders

## University

- Service:** **Communications Officer (GIS Student Organization)** May 2022 - May 2023  
University of Minnesota - Twin Cities, Minneapolis, MN
- Facilitated outreach efforts and monitored student organization emails & website
  - Composed communications about events to students, professionals, and companies
  - Co-organized the 2023 GIS Career Fair with 26 vendors and over 50 attendees

**Technical Skills:**

Geographic Information Systems - ArcPro/ArcPy, QGIS, PostGIS, Geopandas/PySAL/Rasterio

Computational Programming - Python, MATLAB, R

Other - Canvas, Zoom, GitHub, Linux OS (Ubuntu), L<sup>A</sup>T<sub>E</sub>X