

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

**Rob Hendrickson**  
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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:**      **Advanced Geospatial Analysis (Instructor)**      Aug - Dec 2024  
Macalester College, St. Paul, MN  
*Topics Covered:* Autocorrelation, Point Pattern, Interpolation, Regression, Networks
- Led a self-designed course introducing foundations of advanced geospatial analysis
  - Weekly tasks included: Lectures, Discussions, Student Support Hours, Lab instruction in ArcPro's ModelBuilder, Composing Feedback, Email Correspondence & Group Project Management
- 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 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 - Aug 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:** **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
- Review grant applications and organize workshops

**Independent Contractor** Jan 2024 - Apr 2024  
City of Minneapolis Health Department, Minneapolis, MN

- Co-developed a project to create a real-time, hyper-local text alert and reporting system for poor air quality events in Minneapolis
- Coordinated with various stakeholders including government officials and employees, researchers, non-profits, community organizations, and residents
- Consistently contributed to and managed the open-source project on GitHub

**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/Moodle, Zoom, GitHub, Linux OS (Ubuntu), L<sup>A</sup>T<sub>E</sub>X