

Rob Hendrickson

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

Objective:
An instructing position in
geographic information science.

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-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
- 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^AT_EX