

# Sarah Wood

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## EDUCATION

### University of Minnesota

Minneapolis, MN

*Bachelors in Computer Science | Bachelors in Global Studies | Minor in Spanish*

**GPA: 4.00**

- **Relevant Coursework:** Algorithms & Data Structures, Discrete Structures, Global Modernity & Capitalism, Machine Architecture & Organization, Quantitative Political Analysis
- **Awards/Honors:** 2023: Dean's List (Fall), Honors, Nebraska Seal of Biliteracy, U.S Presidential Scholar; 2024: Dean's List (Fall, Spring), Honors

## EXPERIENCE

### University of Minnesota Knowledge Computing Lab

Minneapolis, MN

*Undergraduate Researcher*

*February 2025 - Present*

- Developed deep learning models to advance spatial AI research
- Utilized big data processing tools (Python, SQL) to analyze spatial datasets to improve spatial prediction analysis
- Illustrated findings and qualitative research results to cross-departmental peers via formal lab presentations

### University of Minnesota College of Science & Engineering

Minneapolis, MN

*Computer Science Teaching Assistant*

*August 2024 - Present*

- Introduced over 700 students per semester to key programming concepts and Python fundamentals by leading lab sections, diagnosing and debugging program errors, and providing personalized tutoring during office hours
- Created an *Alternatives to AI Handbook*, compiling teaching methods, study strategies, debugging techniques, and online computer science resources to support students' learning and combat increased generative AI usage

### Code the Gap

Minneapolis, MN

*Computer Programming Tutor*

*September 2024 - Present*

- Improved programming education outcomes with underserved K-12 students, advancing STEM education and participation
- Led outreach efforts, expanding programming education to four school districts for Spring 2025 and connecting students with diverse STEM professionals from local engineering companies to showcase potential career pathways

## PROJECTS

### Mobility Mining Analysis (Python, SQL)

**March 2025 - Present**

- Currently developing a geospatial language learning model by querying large aggregate population datasets from Shanghai and Beijing using PostgreSQL to hypothesize key urban-rural migration patterns
- Analyzed urbanization and megacity migration by conducting an extensive literature review on Chinese domestic policy, demographic shifts, and economic drivers shaping migration trends

### Personal Website (CSS, HTML)

**January 2025**

- Utilized modern accessibility guidelines to create a reactive and dynamic site layout with modern design sensibilities
- Optimized site performance by employing semantic HTML and CSS flexbox/grid, resulting in faster load times and improved accessibility for users

## TECHNICAL SKILLS

**Programming Languages:** C, CSS, HTML, Java, Python, R, SQL

**Software:** Git, GitHub, Markdown, PostgreSQL, R-Studio, VS Code

**Soft Skills:** Data Analysis, Leadership, Problem-Solving, Project Management, Teaching, & Technical Writing

**Languages:** English (Native Language), Spanish (Working Proficiency)