# Sarah Stec

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Canton, MI

## Education · University of Michigan

**Master of Science in Engineering in Computer Science**                     January 2024 - December 2024
Summa Cum Laude | GPA: 3.89/4.00
Course highlights: Randomness and Computation, Foundations of Artificial Intelligence, Systems for Generative AI


**Bachelor of Engineering in Computer Science, Minor in Mathematics**          August 2020 – December 2023
Summa Cum Laude | GPA: 3.82/4.00
Course highlights: Data Structures and Algorithms, Web Systems, UI Development, Cybersecurity, Differential Equations

## Key Skills

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|---|---|---|
| **Advanced:** C++, C, Python | Passion for learning | Educational public speaking |
| **Intermediate:** React.js, Vue.js, | Collaborative problem solving | Analytical thinking |
| JavaScript, SQL | Pair Programming | Test-driven development |

## Relevant Experience

**College of Engineering | University of Michigan**                     January 2022 – December 2024
**Data Structures and Algorithms Teaching Assistant**
- Aid student learning of fundamental data structures and algorithms in C++ for 950+ students by instructing weekly two-hour labs of 30+ students, providing weekly 1-on-1 office hours, and answering questions on online course discussion forum, receiving over 10,000 questions per semester


**School of Information | University of Michigan**                     May 2024 – September 2024
**Full Stack Developer · Internship**
- Collaborate closely with the Michigan Public Health Integrated Center for Outbreak Analytics and Modeling (MICOM) on a $17.5 million project that graphically tracks state vaccination records
- Pair program, implement, and peer review key full stack features, including tables, charts, data processing scripts, and integration and unit tests using React.js and Python


**Information and Technology Services | University of Michigan**          May 2023 – August 2023
**Full Stack Developer · Internship**
- Designed and implemented a user-friendly web application enabling network engineers to facilitate customized wireless testing of WiFi networks via Vue.js, Node.js, and MongoDB
- Automated configuration file generation and custom script flexibility to provision tasks to 100+ Raspberry Pi computers via user interface


**Dynamic Map Platform North America (formerly Ushr)**                     May 2022 – August 2022
**Software Developer · Internship**
- Designed and implemented an interactive data analysis dashboard for speed limit propagation algorithm, resulting in the correction of over 2,000 speed sign inconsistencies through detailed data analysis.
- Engineered automated test cases in Python to support test driven development of a data extraction tool

## Projects

**SignSavvy | Software for Accessibility Capstone**
Web app that provides users with real-time translation of American Sign Language (ASL) using React.js and MediaPipe

**SoundScholars | AI in Education Course**
Cognitive tutor that teaches novices musical rhythms via learning pages and exercises via React.js, Python, and SQLite

**LLM Inference Scheduling | Systems for GenAI Course**
A novel scheduling algorithm for LLMs that combines Round-Robin (RR) and Shortest Job First (SJF) approaches to minimize latency and improve fairness.

**Ask485? | Web Systems Course**
A scalable, fully functional search engine pairing full-stack development with an inverted index of webpages using Python, React.js, and SQL