Amy Lee

amyrlee@umich.edu • https://tessaslice.github.io/ • https://www.linkedin.com/in/amy-lee-umich/

Education

University of Michigan — College of Engineering **Ann Arbor, MI**

Bachelor of Science in Engineering in Computer Science *May 2026*

- **GPA:** 4.00/4.00 | **Awards:** Engineering Dean's List, William J. Branstrom Freshman Prize
- **Courses:** Data Structures & Algorithms, Robotics Mapping & Navigation, Web Systems, Computer Organization

Work Experience

Nexteer Automotive **Saginaw, MI**

Embedded Systems Intern *May 2024—Aug. 2024*

- Doubled handwheel angle sensor sampling down to 1 millisecond using C, improving sensor throughput.
- Developed robust algorithm that decreased function runtime by 7 times than the production firmware on existing car steering systems by replacing a table search with an analytical method.
- Updated sensor firmware to the highest automotive safety standard per sensor datasheet specifications.
- Fabricated a 25-pin connector to enable a power supply to be remote programmable.

Michigan State University St. Andrews **Midland, MI**

Student Researcher *Jun. 2022—Aug. 2022*

- Designed customizable knee pads and analyzed effectiveness through FEA analysis and physical compression rigs.
- Utilized EinScan 3D scanner, Material Testing Systems machine, and a variety of 3D printers (e.g. Prusa i3 MK3S+, FlashForge Dreamer NX, Raise 3D Pro3) for knee pad design, fabrication, and testing.
- Awarded Top 3 Poster in regional American Chemistry Society conference.

Extracurricular/Activities

Michigan Solar Car Team **Ann Arbor, MI**

Software Developer *Aug. 2023—Present*

- Overhauled simulator architecture to simulate race with respect to time, which enables developers the opportunity to validate the simulator software and tune cruise control PID coefficients through software.
- Simplified the software's installation requirements by replacing Rust time tools with C++ time tools.
- Spend 8+ hrs/week improving proprietary simulator software by updating the physics models, the command line interface, data structures, and added functionality to simulate race with respect to time in C++.

Projects

V^2/R

- VR application that teaches the fundamentals of basic circuitry by placing different components onto a breadboard.
- Developed custom circuit network analysis to ensure circuit validity and calculates the current and voltage drop of the electrical component. Built with Unity, C#, and Blender. Awarded Grand Prize at MHacks 2024.

Wireless Walker

- An enhanced walking stick that alerts the user of potential cane collisions by emitting a sound on the user's mobile device. Created using Arduino, servo, ultrasonic sensor, and written in C++. Placed 3rd at SpartaHack 8.

Insta485

- Full-stack web app that enables users to create posts, comments, and personalized profiles using Flask and React.
- Created responsive interfaces using React such as authentication, post interactions, and personalized user accounts.
- Used Flask frameworks to develop REST APIs and route requests and processed them by generating data from SQLite database. Hosted the website using AWS EC2 to deploy a live version of the web app.

Skills

- **Languages:** C++, C, Python, Java, C#, JavaScript
- **Technologies:** WSL, Git, HTML/CSS, ReactJS