Jiayu Liang (Amy)

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EDUCATION

University of Michigan - Ann Arbor **Expected May 2026**

Bachelor of Engineering, Major in Computer Science, Minor in User Experience Design (GPA: 3.67) Ann Arbor, MI

- Relevant Courses: Data Structures and Algorithms, Software Engineering, Web Systems, Building Data-Driven Web Applications, Web Design Development and Accessibility, User Assessment and Usability Evaluation
- Society of Asian Scientists and Engineers (SASE) President

EXPERIENCE

Everyone Can Code Chicago *Partnered with Apple* Chicago, IL

Machine Learning Teaching Assistant **June 2024 - August 2024**

- Facilitated labs to guide ~20 students through XCode and CoreML tools to build, train, and test image and sound classification models, fostering a deeper understanding of machine learning.
- Applied machine learning models to community-focused projects, assisting ~20 students in building apps that address community needs and provide tangible benefits to users.

Software Engineer **September 2022 - December 2022**

- Collaborated with a team of 4 undergraduate engineers to wireframe, design, and develop an iOS food scanner app using SwiftUI [GitHub], enabling users to scan and identify selected allergens by leveraging the Open Food Facts API, helping users prevent allergic reactions.
- Designed and optimized the app's website using Wix, incorporating user feedback to improve navigation and communicate the development process and app features.
- Presented the product launch through Zoom and YouTube Live to an audience of 100+ and the board of Boys and Girls Club, showcasing the app's functionality and impact.

Developer **July 2022 - August 2022**

- Led a team of student developers in designing an interactive language learning app prototype. This project earned a top 4 ranking among 29 teams.
- Managed the development process in an agile way through active check-ins and progress tracking using Trello, resulting in project completion ahead of the deadline.
- Presented the final prototype at the Michigan Ave Apple Store in Chicago with 200+ people in the audience.

PROJECTS

MST, Shortest Path Algorithms, and TSP (Drone Delivery) **April 2024**

- Demonstrated full understanding of complex graph algorithms such as Prim's and Dijkstra's by evaluating the most efficient algorithm for particular scenarios and coding it in C++.
- Researched to identify, learn, and implement various TSP heuristics to construct a fast and effective bounding algorithm for the TSP.

Database Shell and SQL (SillyQL) **March 2024 - April 2024**

- Implemented SQL in C++ by building a binary search tree for the database shell and hash tables to manipulate the data based on user input, ensuring optimal storage and runtime.

Path Finding Using Hash Tables (Letterman Reboot) **January 2024 - February 2024**

- Developed a C++ program that morphs one given word to another by conducting either breadth-first search or depth-first search through a text dictionary, then outputs in two different modes decided by the user input.
- Devised custom data structures including deques and hash tables to optimize the program's storage and runtime.

SKILLS

Programming Languages/Technologies: C/C++, Python, Swift, Java, JavaScript, HTML/CSS, React, SQLite, Flask
Languages: English (Native), Mandarin (Native), Japanese (Basic)