Marie Yu

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Education

University of Michigan *Ann Arbor, MI*   **GPA:** *3.78/4.0*   *April 2025*
    Bachelor of Science, **Computer Science**
    Notable Coursework: Operating Systems, Data Structures and Algorithms, Databases, Computer Security, Web Systems

Work Experience

Senior Software Engineer (Typescript, React, Astro, SQL, AWS, Cloudflare, wpAPI)   *Jan 2023 - Present*
The Michigan Daily, *Ann Arbor, MI*
- Building and maintaining games editors and game logic for The Michigan Daily's Crosswords, Word Links, and Gridlocked, using a SQL database to store game data and cron triggers to schedule releases of new puzzles.
- Built an accessibility auditor using a SQL database and cron trigger to fetch and store alternative text data every day on the Michigan Daily website, displaying the amount of images with alternative text.
- Deployed The Statement 2024 Love Edition using React with an Amazon S3 bucket and Amazon SES service to send out emails.
- Using React and Astro with a PostgresQL database, helped build an internal tool to deploy 20+ special landing pages.
- Guides and leads a team of 10-15 web engineering members in 3-5 semester long projects.

Software Product Manager - Mobile App (Typescript, React Native, wpAPI)   *Jan 2022 - Dec 2023*
The Michigan Daily, *Ann Arbor, MI*
- Built The Michigan Daily news app with React Native and deployed to readers on the App Store and Google Play Store, reaching #12 ranking on News and Magazines in the Google Play Store.
- Managed and led a team of 7 software developers to continue improving the UI/UX of the app and adding new features.

Software Engineer Intern (React, React Native, Redux, Javascript, AWS, Firebase, NoSQL)   *May 2022 - May 2024*
Avenu, *Ann Arbor, MI*
- Planned logistics of API integration with Ticketmaster into Firestore database by incrementally reading and inputting 10,000+ events into the database, substantially increasing the outreach and impact of the app.
- Took ownership and constructed in-app and quit state notifications using Firebase messaging, React Native push notifications, Google Cloud functions and AWS Lambda functions.
- Implemented pagination throughout the app, doubling the loading speed of guest lists, events, chats, and users.
- Implemented 100+ UI/UX changes and improvements for greater user experience and accessibility.

Software Engineer Intern - Backend (Python, MongoDB, Firebase, NoSQL)   *Jan 2022 - April 2022*
Avenu, *Ann Arbor, MI*
- Implemented Python scripts to create, read, update, and delete data in a NoSQL database for database testing
- Created Python scripts allowing generation of mock data for NoSQL Firestore database based on statistical parameters specified in input JSON file, providing customizability and ease-of-use for internal developers.
- Wrote design doc detailing objectives, metrics for success, technologies, alternatives, dependencies, and documentation
- Wrote 8 unit tests in PyTest, providing a measure of code quality improving maintainability of project for future developers.

Projects

Detroit-Windsor Mapping Puzzle (Typescript, PostgreSQL, SvelteKit, OpenLayers, Cloudflare)
- Built a website with Typescript that allows users to drag bordering municipalities in the correct location. Reads in GeoJSON to render the map of Detroit-Windsor and surrounding cities.
- Implemented SQL reads and writes to store and display user submissions, including using PostGIS to convert and store GeoJSON data.

Leadership Experience

Joy of Coding Coach (Python) *University of Michigan, Ann Arbor, MI (Virtual)*   *June 2022 - Aug. 2022*
- Part of a team of 16 coaches tutor a group of 1630+ students through online coding exercises in Python
- Taking 1 hour long shifts to aide students via email and video call, successfully guiding 10+ students through exercises

Coding Tutor/Community Coordinator *Detroit, MI*   *Oct. 2021 - Present*
- Prepared curriculum for new teachers, and facilitated communication with Detroit Community Schools team
- Provided weekly lessons and activities to 30+ K-12 students in Detroit to supplement their school learning experience and foster a passion for coding within underrepresented communities in computer science in Scratch, MakeCode, and Python.

Skills

Languages: C/C++, Java, Python, iPython, Jupyter, Javascript, Typescript, React, React Native, CSS
Technologies: MacOS, iOS, Git, XCode, VSCode, MongoDB, Firebase, Cloudflare, NoSQL, SQL, Redux, Google Cloud, AWS, Docker