Melina O'Dell

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Education

University of Michigan – Ann Arbor, MI

Master of Science in Engineering in Computer Science (GPA: 4.00 / 4.00)   *August 2023 – April 2025*

Bachelor of Science in Engineering in Computer Science (GPA: 3.85 / 4.00)   *September 2019 – April 2023*

- **Relevant Coursework:** Web Systems, Software Engineering, Human-Computer Interaction, Database Management Systems, Information Retrieval and Web Search, Foundations of Artificial Intelligence

Experience

Verkada – San Mateo, CA

Frontend Software Engineering Intern, Access Control   *May 2023 – August 2023*

- Created new interactive, transformable Verkada door device representation for Floorplans UI using **React, TypeScript, Redux, and SVG elements**, **improving customer experience by 33%** by expanding product compatibility
- Improved existing project architecture by **designing generalized and reusable components** to support future product expansion
- **Documented implementation plans and engineering tradeoff discussions** in a comprehensive technical project specification, enhancing project clarity and boosting cross-team awareness
- Worked collaboratively with Product and Design teams to make **frequent, iterative improvements to UX** and ensure product launch by end of quarter

University of Michigan College of Engineering – Ann Arbor, MI

Web Systems Teaching Assistant   *August 2022 – Present*

- Assisted teaching an upper-level CS course of **700+ students**, covering **full-stack development** using Flask, SQL, and React, AWS deployment, REST APIs, MapReduce, Hadoop, and search engines
- **Lead weekly lab sections for 30+ students to promote independent learning** and provide hands-on practice with fundamental web development concepts and debugging techniques
- Maintained course autograder by **writing new unit tests** and **updating and deploying Docker images**
- Implemented enhancements for instructor solutions to support **continuous refinement of course projects**

Research Assistant   *September 2023 – Present*

- **Developed and deployed a custom generative AI chatbot** trained on course materials to a course of 700+ students as a supplemental course resource
- **Interpreted and analyzed quantitative and qualitative survey results** about student experiences and custom chatbot usefulness
- Press: [GenAI in computer science education: Friend or foe?](#)
- Publication: "A Custom Generative AI Chatbot as a Course Resource," American Society of Engineering Education (ASEE), June 2024

The Michigan Daily – Ann Arbor, MI

Project Manager and Web Developer   *December 2022 – Present*

- **Organized and lead weekly subteam meetings** and facilitated cross-team collaboration to ensure clear communication and progress towards project goals
- **Maintained technical specifications** and utilized project management software (Notion) to track development progress and timelines for 5+ projects simultaneously
- Developed special project websites visited by **3000+ users/week** using React, HTML/CSS, MaterialUI, and AWS services

Learning A-Z – Ann Arbor, MI

Software Engineering Intern   *May 2022 – August 2022*

- Built and documented a **full-stack dashboard** feature to display four types of classroom performance statistics to teachers using Angular, Laravel, and MySQL
- Presented research project on **cloud deployment** and demoed hosting a Flask app using Google Cloud App Engine and Datastore
- Designed **high-coverage unit tests** and participated in code reviews to improve code quality and maintainability

Projects

Twitter Countdown Bot | [Source Code](#)   *August 2021*

- Planned and developed a bot using Python to post scheduled tweets counting down to a movie premiere
- Tweets were actively shared and viewed **3000+ times/day**
- Utilized the Tweepy library to **interface with the Twitter API** and **deployed to Heroku**

Technical Skills

Languages: JavaScript, TypeScript, Python, HTML/CSS/SCSS, SQL, PHP, C/C++
Technologies: React, Redux, Angular, Flask, PostgreSQL, MySQL, SQlite, AWS EC2, Heroku, Docker, cURL
Software/Tools: VSCode, Git, GitHub, Emacs, Xcode, IntelliJ platform, phpMyAdmin, Notion, Linear, Google Workspace