

Michael Zhong

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Skills

- **Languages & Software:** JavaScript, TypeScript, React.js, C++, C, C#, Python, SASS, CSS, Flask
- **Tools & Operating Systems:** SVN, Git, Jasmine, FakeItEasy, Linux, Windows, MacOS

Experience

Epic Systems

July 2019 – Present

Software Developer - Inpatient EMR

- Developed products across a massive, integrated software suite, crafting code used company-wide and releasing high-quality, accessible tools relied on by nurses around the world.
- Designed and built out a high-visibility enhancement, using **React** and **TypeScript** to create a user-centered workflow automation tool, saving nurses hundreds of hours of documentation time.
- Led scoping and implementation discussions with multiple customers worldwide, solidifying design requirements and championing successful adoption of new features.
- Refactored and code reviewed complex projects during our conversions from VB to **C#** and **TypeScript**, transforming legacy code into a robust and maintainable codebase.
- Owned **unit** and **performance testing** for our web applications, ensuring code quality and improving baseline response time metrics by as much as 20%.
- Improved processes and team productivity through responsibilities such as **Scrum Master**, **defect triaging**, and new developer **mentorship**.

CroMa Lab

May 2018 – April 2019

Research Platform Engineer Lead – CroMa ALE

- Led a team of 3 in developing a web platform for collecting reinforcement learning feedback on Atari gameplay using **OpenAI Gym**, building an open source tool for crowdsourcing RL reward data.
- Architected our system framework, with **JavaScript**, **HTML**, and **Bootstrap** on our frontend, **Flask**, **Nginx**, and **Gunicorn** providing a server stack, and **Python** for business logic and communication with our **SQLite** database.
- Deployed our platform with **AWS** and crowdsourced real RL reward data via Amazon Mechanical Turk, contributing as a co-author for a research paper on human-in-the-loop reinforcement learning.

Projects

Multi-Threaded Remote File Server

November 2018 – December 2018

- Designed a remote **Linux** file server in **C++** capable of servicing multiple clients concurrently, and managing ownership permissions within a hierarchical structure.
- Optimized performance with thread pools and managing read/write locks at different file levels.

UMIGV – Autonomous Ground Vehicle

September 2017 – June 2018

- Built a self-driving robot vehicle capable of carrying a payload to waypoints fully autonomously.
- Implemented communication stack between GPS waypoints and robot positioning for autonomous control using **C++** Robotic Operating System (**ROS**) library and tested simulations with **Gazebo**.
- Represented U-M Ann Arbor in its debut at the Annual Intelligent Ground Vehicle Competition.

LEDsense (MHACKS 9): <https://devpost.com/software/ledsense>

March 2017

- Built an **Arduino** project that used **MATLAB** to analyze audio files and categorize timestamps of significant frequency or tempo changes.
- Automated the generation of **C++** sketches that provided instructions for a processor to create complex rhythm-based light effects with LEDs, solving a challenge that was previously slow and tedious.

Education

University of Michigan - Ann Arbor

B.S. Computer Science, Class of 2019

- GPA: 3.67/4.00
- University Honors (2015-2019)
- Member, IEEE-Eta Kappa Nu (HKN-BE) Honor Society