Calvin Huang

LinkedIn

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EDUCATION

University of Michigan — Cincinnati, OH

BSE Computer Science, GPA: 3.850 — *September 2018-expected May 2022*

- Course Highlights: Machine Learning, Computer Vision, Cybersecurity, Data Structures Algorithms, Databases, Computer Architecture, Web Systems, Linear Algebra

PROFESSIONAL EXPERIENCE

Principal Financial Group — Remote

Full-Stack Software Intern — *June 2020-August 2020*

- ProjectsSpearheaded the transition to a new change management system, added security features to app deployment pipeline via back-end implementation and ansible automation, and created a server check for conflicting jobs in order ensure reliable metrics on feature changes and deployments.
- Added deployment API features by implementing a cycle all functionality and reducing deployment downtime through dynamic delay integration.
- Led Code Jam team in brainstorming and development of a full-stack web app hosted in AWS and mentored peers in working with web technologies such as React, Flask, and web hosting within the span four days.

Do-It-Yourself Geiger-Mueller Smart Detector Research Project — Ann Arbor, MI

Research Assistant, Dr. Kimberlee Kearfott — *September 2019-Present*

- Designed accessible, self-assembled radiation detectors for high school students to promote interest in engineering and STEM fields.
- Developed iOS and Android apps and heat map interface for tracking radiation data collected by Raspberry Pi computers in student-built radiation detectors.

MRover Project Team — Ann Arbor, MI

Computer Vision Software Engineer — *September 2018-May 2020*

- Implemented AR tag detection algorithms using OpenCV for a fine-and-identify task in the University Rover Challenge.
- Presented professional design reviews to the team to interface with other sub-teams to decide design priorities for implementing obstacle detection.

PERSONAL PROJECTS

COVID-19 Heatmap

Web Application for Monitoring Projections of the Spread of COVID-19

- Designed client-side web app using React and Google Maps to visualize global data of COVID-19 cases in the past, present, and future using heat-maps.
- Developed efficient REST API and used Rust for multithreading to collect and sanitize detailed geographical data at specified time intervals and communicate current data on-demand to the front-end.

Anonymous Video Conferencing

Video Chat Web Application for Virtual Hangouts

- Incorporated WebRTC video technology into modern video-client web app that can be easily self-hosted for secure and anonymous communication.
- Set up Node.js backend socketing and custom peer-to-peer server for reliable and secure video calling.

Personal Robotic Arm

Automated Mini Robotic Arm for Simple Tasks

- Constructed automated 6-axis, 3-D printed robotic arm to perform sorting tasks in a small workspace.
- Created Windows desktop application using .NET Framework to interface with micro-controllers to store data used to automate the robotic arm.

Skills

- **Programming Languages**
  C/C++, MATLAB, Python, Swiift, C, Java, Javascript/TypeScript, Rust, Julia, MySQL, MongoDB, DynamoDB
- **Technologies and Frameworks**
  OpenCV, .NET, React, NodeJS, Flask, JAX-RS, Rocket (Rust), Genie(Julia), WebAssembly, AWS, Google Cloud, Jupyter

Honors

- **University of Michigan Dean's Honor Roll** *December 2018-Present*

- **Tau Beta Pi Michigan Gamma Chapter Active** *September 2019-Present*