Calvin Huang

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Education

- **University of Michigan** — Ann Arbor, MI
  BSE Computer Science, GPA: 3.824 — *September 2018-expected May 2022*
  - : Course Highlights: Data Structures Algorithms, Databases, Computer Architecture, Web Systems, Linear Algebra

Professional Experience

- **Principal Financial Group** — Remote
  Full-Stack Software Intern — *June 2020-August 2020*
  - : Spearheaded 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 Rocket (Rust) REST API with server jobs to collect detailed local data at specified time intervals and communicate current data on-demand to the front-end.
- **Personal Web Server**
  Secure Server for Home Automation
  - : Set up Ubuntu server with Apache, MySQL, and Dynamic DNS services for personal web hosting and secure database storage.
  - : Automated home tasks such as efficient lighting using IFTTT applets and webhooks from personal websites to implement the Internet of Things.
- **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, Switft, C, Java, Javascript/TypeScript, Rust, MySQL, MongoDB, DynamoDB
- **Technologies and Frameworks**
  OpenCV, React, NodeJS, Flask, JAX-RS, Rocket (Rust), WebAssembly, AWS, Google Cloud
- **Markup**
  JSON, YAML, Markdown, LaTeX, HTML, XML, CSS

Honors

- **University of Michigan Dean's Honor Roll** *December 2018-Present*
- **Tau Beta Pi Michigan Gamma Chapter Active** *September 2019-Present*