

# Calvin Huang

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## EDUCATION

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- **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 and Algorithms, Databases, Computer Architecture, Web Systems, Linear Algebra

## PROFESSIONAL EXPERIENCE

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- **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 find-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

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- **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

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- **Programming Languages**  
*C/C++, MATLAB, Python, Swift, 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

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