

University of California San Diego (B.S. Computer Science)

Expected June 2021

// skills

- Java, Python, C++, C, SQL, JavaScript, Django, React Native, HTML5, CSS3
- GNU Linux, Mac OS, FreeBSD, Windows

// experience

University of California San Diego (Undergraduate Researcher)

August 2019 – Present

- Developing an online homework platform for students taking Computer Engineering courses
 - Enables instructors to create problems and assignments that can be shared and assigned to students.
 - This auto-corrects the student's homework and saves funds by preventing the hiring of more graders, allowing the funds to go to more tutors which is highly requested by the students.

San Diego Supercomputer Center (Undergraduate Researcher)

October 2018 – November 2019

- Developed new features for the CIPRES Science Gateway that saves time and bandwidth by allowing researchers to edit archived files online
- Wrote multithreaded software to efficiently download large EEG datasets for processing on the Comet Supercomputer
- Wrote software to improve the NSG Portal upload features with Java and Python

NASA Ames Research Center (Research Intern)

June 2016 – March 2018

- Implemented an upgraded root name server anycast infrastructure to deploy 350+ nodes worldwide, created a custom FreeBSD installer and used Ansible.
- Researched and implemented the best way to monitor the health of E-root servers located at NASA Ames and created a system to immediately report anomalies with Zabbix.
- Created a website to monitor Domain Name System (DNS) queries and responses from all the E-Root anycast DNS server nodes worldwide, that maps and graphs all data, using HTML, CSS, JavaScript, Python, Flask and SQLite.
- Implemented a Linux backend repository for ZigBee sensor data using a PHP REST API, MySQL, and wrote the software for the ZigBee hardware to stream the data to the server with Python.
- Created software to aggregate DNS query data from three different sources to produce summary output files, issue email alerts if any source query data was missing, and issue email alerts when an external monitoring service reports degradation of E-root service.

// projects

- **Coronavirus Stats:** An application developed to view the latest statistics and news articles on the COVID-19 outbreak. Was released for both Android and iOS. Unfortunately, was later removed from the stores to prevent panic.
- **Vital:** A smart pillbox made to remind elders to take the right medication on time. (Won Best IoT Hack & 2nd Place Top Overall Hack at HackFresno). I wrote the software that controlled the pillbox and its hardware, allowing it to make requests to our backend servers to receive the proper medication schedule for the patient.
- **WooCreator:** An automated app creator for WooCommerce WordPress sites. Turns any WordPress site into a native app. I developed the backend that runs on every application individually.
- Developed a home automation system with face recognition that monitors security cameras and reports anomalies.