

Ethan Tran

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Education

B.S. in Electrical and Computer Engineering; University of California, Los Angeles

GPA: 3.84

-Expected Graduation: Winter 2020

Relevant Coursework: Object-Oriented programming, Algorithms and Data Structures, Intro to Machine Learning, Computer Networks, Signals and Systems, Digital Signal Processing, Feedback and Control

Experience

Rockwell Collins Advanced Datalinks - Systems Engineering Co-op

January 2018 - August 2018

- Software development in a Scrum/Agile framework with two week sprints for a new product development team
- Wrote Python libraries and scripts to enable testing on remote raspberry pis, reducing developer hours
 - Developed the web interface to facilitate engineer testing and visualization experience (Javascript, HTML)
- Created unit and integration tests in C++ and expanded on the error reporting system
- Redesigned API to allow for batched calls between the UNIX operating environment and application layers (C++)
- Developed custom tools to expedite plugin updates for debugging software

AIAA Unmanned Aerial Systems - Software Engineer

September 2017 - Present

- Architected a data pipeline for real time drone to classify objects in real time using Keras and OpenCV
- Configured automation framework for computer vision testing using Jenkins and Docker container deployment on Amazon Cloud
- Built a node.js server to enable real time interaction and visualization of the data obtained from the flying drone and incorporated ZeroMQ for message queueing
 - Developed RESTful APIs to service front-end built with React

UCLA Rocket Project - Communications Engineer Lead

May 2017 - June 2018

- Directed a team of 8 students to develop a communications system to ensure reliable control and telemetry with rocket
- Wrote embedded software enabling data acquisition and wireless communication using TCP and UDP
- Developed Python and C++ modules to visualize rocket instrumentation data in real time using Python matplotlib and concurrently save the data to an onboard MySQL database
 - Employed use of C POSIX threads and python concurrency to improve data processing speeds by a factor of three

IEEE Advanced Projects

September 2016 - June 2017

- Designed interactive games (e.g. whack-a-mole) in C that employ the use of different communication protocols; e.g. I2C, SPI
- Created a wireless air mouse with custom gestures that can be used for presentations

Projects

Danger Zone!

- Developed an Android app that acts as a civilian alert system to notify users of dangers within their proximity
 - Implemented a geofence using Google Maps API and push notifications for alerts
- Flask backend with Firebase as a database to update, store, and retrieve real time location and alerts

Campus Market

- Built a full stack e-commerce platform using Javascript and AWS for users to buy and sell items on an interactive map
 - Implemented search based on keywords and filtering algorithm to narrow down search results
- Designed backend server Integrating Amazon DynamoDB to store user data and listed items

Skills

Programming Languages: Experienced: C++, C, Python; Familiar: Java, Javascript, Bash Scripting, HTML, CSS, SQL

Software: MySQL, MongoDB, Git/SVN, Agile Scrum, MATLAB, Android SDK, Flask, Django, Node.js, Express, OpenCV, Keras, Tensorflow, Docker, AWS, React, GDB, Apache

Activities

MentorSeas Mentor

September 2017 - Present

- Mentored first year and transfer computer engineering students

UCLA Learning Center Consultant

September 2017 - December 2017

- Managed technological resources available to students and led workshops teaching students new skills

HKN Honor Society Tutor

September 2016 - Present

- Provide tutoring help in core electrical and computer engineering courses