Ethan Tran

714-949-7327 · EthankpTran@gmail.com · bitbucket.org/ekptran · Los Angeles, CA

Education

B.S. in 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, Operating Systems

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 dynamic spectrum software defined radio
- 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 for core C++ system and expanded on the error reporting system
- Redesigned API to use batched calls between the UNIX operating environment and application layers (C++)
- Developed tooling suite to expedite plugin updates for debugging software

AIAA Unmanned Aerial Systems - Software Engineer   **September 2017 - Present**
- Architected the data pipeline for drone to classify objects in real time (Keras, Tensorflow and OpenCV)
  - Manage machine learning worker nodes and implemented message queueing service
- Configured automation framework for computer vision testing using Jenkins and Docker container deployment on Amazon Cloud (EC2)
- Built a node.js server to enable real time interaction and visualization of the data obtained from the flying drone
  - Developed RESTful APIs to service front-end developed using Reactjs

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 triple data processing speeds

IEEE Advanced Projects   **September 2016 - June 2017**
- Designed interactive games (e.g. whack-a-mole) and a wireless air mouse in C that employ the use of different communication protocols; e.g. I2C, SPI

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 web application with PostgreSQL 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; Proficient: Java, Javascript, Bash Scripting, HTML, CSS, SQL
Software: Linux/Unix, MySQL, MongoDB, Git/SVN, Agile Scrum, MATLAB, Android SDK, Flask, Django, Node.js, Express, OpenCV, Keras, Tensorflow, Docker, AWS, React, GDB

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 Tutoring Chair   **September 2016 - Present**
- Provide tutoring help in core electrical and computer engineering courses (e.g. data structures, computer systems)