# Justin Le

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## RESEARCH

### CALIFORNIA PLUG LOAD RESEARCH CENTER
Undergraduate Researcher
Jan 2018 – Present | Irvine, CA
- Test, demonstrate and develop wired and wireless control systems for managing energy consumption of plug load devices in residential and commercial settings.
- Working on implementation of an ESP-WROOM 32 embedded system that uses RTOS, I2C and SPI protocols.
- Researching MQTT IOT protocols to implement publish/subscribe client interfaces using Python/Eclipse Paho.

## PROJECTS

### THALES PROJECT ARDUINO - SCOUT CAR
Oct 2017 – Present | Irvine, CA
- Worked on a team of 4 to create a scout car that uses an Arduino Uno/ATMega328p, Infrared distance sensor, HC-05 Bluetooth module, L298n motor driver, custom pan-tilt servos, and eye-tracking software.
- Specifically created and designed circuit schematics to support multiple components.
- Helped create a Python script to convert and send Tobi EyeX gaze data to the Scout Car via the HC-05 Bluetooth module.

### MICROMOUSE
Jan 2018 – Present | Irvine, CA
- Currently in the process of designing/building a small robotic mouse that autonomously solves a 16'x16' maze with a team of 3.
- Specifically designing a two-layer through board build to reduce size optimize space.
- Embedded system software design in progress to use PID control, a flood fill algorithm and a stack data structure.

## ADDITIONAL EXPERIENCE

### UCI SCHOOL OF ENGINEERING - DEAN'S OFFICE
Lead Student Assistant
July 2017 – Present | Irvine, CA
- Work on data heavy projects using Microsoft Excel/VBA that require a meticulous attention to detail.
- Worked closely with executive members of the University of California, Irvine.
- Required to manage and train new student assistants.

### UCI GUESTS AND EVENT SERVICES
Parking Attendant
Jan 2016 – May 2017 | Irvine, CA
- Campus job where I provided excellent customer service to 30+ UCI visitors per shift.

### ENGINEERING STUDENT COUNCIL - EMF
Student Mentor
September 2017 – Present | Irvine, CA
- Part of a mentoring program, "Engineers Mentoring the Future", that pairs mentors with first/second year engineering students in order to help them both in academics and community involvement.

## EDUCATION

### UNIVERSITY OF CALIFORNIA, IRVINE
BS in Computer Engineering
Expected June 2019 | Irvine, CA

## COURSEWORK

Programming in C
Object-Oriented Programming
Data Structures and Algorithms
Introduction to Data Management
Discrete-Time Signals and Systems
Organization of Digital Computers
Electronics I/II
Electronics and Network Analysis

## SKILLS

### PROGRAMMING
- Java • C • Python • SystemVerilog
- Mathematica • SQL

### SOFTWARE/PLATFORMS
- Eclipse • OrCAD Capture • Git
- EAGLE • PSpice

### HARDWARE
- Arduino/ATMega328p • Teensy32
- ESP-WROOM 32

### FAMILIAR
- LaTeX • Linux • HTML/CSS
- Javascript • MQTT • Assembly

## AFFILIATIONS

- Alpha Phi Omega - (National Service Fraternity)
- ACM@UCI - Association for Computing Machinery
- IEEE/Micromouse