

# Christian Setiawan

📍 San Francisco Bay Area

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## EDUCATION

**University of California, Davis**

De Anza College (Transfer)

B.S. Electrical Engineering

Overall GPA: 3.2/4.0

Expected Grad: June 2018

## SKILLS

### Programming Languages

- C/C++
- MATLAB
- Java
- Verilog
- Python
- Assembly

### Circuit Design

- Altera Quartus/ModelSim
- Cadence OrCAD Capture
- Eagle PCB Design
- PSpice Advanced Analysis

### Lab Tools

- Breadboard Prototyping
- Digital Multimeter
- Function Generator
- Oscilloscope
- Pulse Generator
- Soldering

## COURSEWORK

- Analog Circuits I – II
- Autonomous Vehicle Project
- Computer Architecture
- Digital Systems I – II
- Embedded Systems (Planned)
- Object-Oriented Prog. in C++
- Problem-Solving with C Prog.

## ACTIVITIES

**Theta Tau – Professional Engineering Fraternity**

June 2016 – Present

**Institute of Electrical and Electronics Engineers (IEEE)**

January 2016 – Present

## PROJECTS

### Autonomous Vehicle Senior Design Project (C, Python)

September 2017 – Present

- Building a self-driving race car in a group of four for a nation-wide competition using power MOSFETs, low-dropout voltage regulators, a servo motor, a DC motor, and a Bluetooth controller.
- Programming an OpenMV M7 Camera microcontroller in Python to detect the race track, avoid obstacles, and generate PWM output signals to control a servo in order to automate car steering.
- Manufacturing a custom 2-layer printed circuit board and corresponding Bill of Materials on Eagle.

### FPGA Traffic Light Controller (Verilog)

April 2017 – June 2017

- Developed a traffic light program that is simulated using an Altera DE-10 Lite FPGA board.
- Executed by implementing a finite state machine to implement flip-flops, registers, and counters.

### Programmable LED Banner (C)

April 2016 – June 2016

- Constructed a circuit using soldered LED strips and controlled using an Arduino and Bluetooth.
- Used during recruitment week and events to showcase past fraternity engineering projects.

### 4x4x4 LED Cube (C)

March 2016 – April 2016

- Constructed an LED cube onto a breadboard and modified Arduino C code to program LED lights.
- Presented during UC Davis' Picnic Day to showcase electrical engineering club (IEEE) projects.

### Video Processing Player (MATLAB)

January 2016 – March 2016

- Coded a video player with a working GUI with the ability to search for videos from your computer.
- Features included: play/pause, stop, forward, back, a real-time scroll bar and an RGB histogram.

## WORK & INTERNSHIP EXPERIENCE

### Hardware Engineer Intern | S&C Electric Company

Alameda, CA

June 2017 – September 2017

- Engineered an OrCAD template that made company parts compatible with PSpice Advanced Analysis, assisting in the development and validation of new and existing circuitry.
- Improved Design For Reliability Plan by identifying critical factors that minimize component failure.
- Integrated over 100 parts in future prototype schematics with de-rating and tolerance parameters.

### Electronics Engineer Intern | US Department of Defense – Defense Microelectronics Activity

McClellan, CA

October 2016 – April 2017

- Manufactured integrated circuit wafers with four engineers in a semiconductor fabrication lab.
- Boosted lab efficiency by collecting data from metrology tools and by optimizing test conditions and variables, resulting in decreased experiment time and increased diffusion yield on wafers.
- Conducted a daily quality check of over 100 components, equipment, and gases in two facilities.

### Computer Technician | University of California, Davis – College of Engineering

Davis, CA

April 2016 – October 2016

- Administered technical support to full biomedical engineering faculty and graduate student body.
- Resolved over 200 tickets as first point of contact, reducing overall ticket wait time by over 50%.
- Worked with two technicians to repair AV equipment, faulty computers, hard drives, and printers.

## LEADERSHIP

### Vice President, External Relations Chair | Theta Tau – Professional Engineering Fraternity

Davis, CA

June 2016 – June 2017

- Oversaw new member initiations, officer elections, and weekly meetings of over 40 members.
- Communicated with National Office board members to organize a UC Davis Western Regional Conference, where over 100 student members from 13 chapters attended.
- Enforced risk management, maintained conflict mediation, and hosted team-building events.