# Christian Setiawan


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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++
- Java
- Python
- MATLAB
- Verilog
- 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.