# 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
- MATLAB
- Javascript
- Python
- Verilog

**Circuit Design Software**

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

**Electrical Lab Tools**

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

## COURSEWORK

- Analog Circuits I – II
- Autonomous Vehicle Project
- Communication Electronics
- Computer Architecture
- Digital Systems I – II
- Embedded Systems (Planned)
- Signals & Systems

## 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 car in a group of four and programming an OpenMV microcontroller to detect the track, avoid obstacles, and generate PWM servo signals for automated camera steering
- Developing a control algorithm by using a Hall Effect sensor for speed detection and PID control to improve range, smoothness, and operational conditions of the speed control system
- Manufacturing a custom 2-layer printed circuit board with 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
- Designed the digital circuit by implementing a finite state machine with over 15 Moore states

**Programmable LED Banner (C)** *April 2016 – June 2016*

- Constructed a circuit using soldered LED strips and controlled it 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*

- Built 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 projects (IEEE)

**Video Processing Player (MATLAB)** *January 2016 – March 2016*

- Coded a video player and 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*

- Automated an OrCAD template which made company parts compatible with PSpice Advanced Analysis, allowing the user to quickly test for circuit failure in upcoming products
- 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