# JUSTIN CHANG

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#### **EDUCATION**

## UNIVERSITY OF CALIFORNIA, LOS ANGELES

**Objective:** Seeking a Summer 2018 opportunity (research or internship)!

## B.S., Electrical Engineering Major (Computer Engineering)

**Expected Graduation: June 2020** 

- Cumulative GPA: 3.83
- **Honors:** Dean's Honor List (Winter 2017), Tau Beta Pi Candidate (top 1/8 of Jr. class engineers) and Eta Kappa Nu Candidate (top ¼ of Jr. class of EE CS engineering), Taiwanese American Scholarship Fund
- Course Highlights:
  - Data Structures and Algorithms (C++)
  - o IoT, Server Clients, GPIO, HTTP basics
  - Intro to Electrical Engineering. Did PID, impedence, circuit analysis, OP AMPS
  - o Logic Design, CMOS, Verilog, FPGA
  - O Software Organization Computer Architecture

## **Current Relevant Coursework:**

- Circuits Theory and Lab
- Systems and Signals

# **Future Relevant Coursework:**

- Algorithms and Complexity
- o Circuit Theory and Lab 2
- o Computer Networks Physical Layer

### **Activities:**

- o UCLA IEEE member, General Board member
- o UCLA HKN Workshop Officer, hold workshops on Matlab and Verilog.
- o Cal Hacks 3.0, created simple iOS apps using swift (github for more details)

## RELEVANT COMPUTER/PROJECTS/SKILLS

## **Physical Therapy Motion Tracker**

- Team project, created a system that tracks how well a bicep curl, shoulder press, is done.
- Used Intel Edison, 9DoF Sensors, FANN (Fast artificial Neural Network) ML library to implement.
- Looked at gyroscopes, accelerometer, and projected values to obtain better data to train neural net.

### Micromouse/OPS

- Created a RODENT, Micromouse maze traversing robot, implemented with PID, Arduino Nano, H Bridge
- Experience with soldering, EAGLE CAD PCB design, Arduino IDE, Motors, DMM, Oscilloscopes

## **Personal Website**

- <a href="http://termular.me/">http://termular.me/</a>, half CV/E-Portfolio, half just about me and what I'm up to.
- Javascript, HTML, CSS (used other javascript and styling libraries to enhance effects on website)

#### **Morse Code Decoder**

- From scratch, created a neural network to decode an input of "short", "long", and letter gaps to a letter.
- Used Verilog, FPGA to synthesize on basys3 hardware, and created modules from simple logic gates.

## Skills (coding)

• C++, Java, C, Matlab, Javascript, HTML, Verilog, Swift, C# (at least some form of familiarity)

### **EXPERIENCE**

### **RESEARCH ASSISTANT**

3/2017 to 6/2017

## Spinal Cord Injury Research Group at UCLA

- GPIO Raspberry Pi3 and Arduino interface help
- Looked over some C and C++ code (Object Oriented Programming Experience)

### **UCLA CAMPUS IOB**

12/2016 to 4/2017

### **Anderson School of Management**

- Car Insurance Ad research, recorded data on consumer and company behavior
- Filled out forms and formed plots on company/consumer behavior changes over time.

## LEADERSHIP/VOLUNTEERING ACTIVITIES

#### **Circle K International**

Joined CKI UCLA, general member volunteering in the community.

**10/2016 to Present**