Kelvin Ly

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Education

University of Central Florida — BSEE, Electrical Engineering

Cummulative GPA: 3.895 — Graduating December 2015

Professional Experience

IBM Extreme Blue Intern, RTP NC — May 2015 - August 2015

- Worked on zero knowledge **encryption** for **IBM Connections Cloud**
- Used **JavaScript and Node.js** for server **backend**
- Modified and used existing **Java** and **Python** code and libraries for various parts of the project
- Worked on an **agile** team of four
- Heavy emphasis on **test coverage** and **unit testing**

University of Central Florida Undergraduate Researcher, Orlando FL — December 2014 - current

- Worked on **RAVEN II** medical robot running **ROS C++** robotics framework
- Did **signal processing** in **Python** in EEG data
- Studied **feature extraction** and **SSVEP frequency detection**
- Used **emokit Python** library to extract signals from Emotiv EEG headset
- Continuing research into SSVEP BCI interfaces

Google Software Engineer Intern, Chapel Hill NC — May 2014 - August 2014

- Worked on benchmarking framework for **Skia** rendering engine team
- Contributed code in **C++**, **Python**, and **Go** for both internal and open source projects

Personal Experience/Skills

- **UCF Lunar Knights** project, electrical/communications teams
  - Helped with **wireless communication** with **Beaglebone Black**
  - **UART** communication with **Arduino** to send **PWM** to motor controllers
  - Helped in robot assembly, troubleshooting and debugging
- **IEEE-UCF Hardware Team** for SouthEastCon, motors team
  - Involved in the design and construction of motors system for competition robot
  - Programmed, along with a few others, the **Arduino** powering the robot during competition
- Senior design project
  - **Hardware system design** for all components
    - Led overall hardware system design
    - Designed schematics for all components using **KiCAD** EDA software
    - Converted schematics into PCBs using **KiCAD**
  - Research into **signal processing** for **feature extraction** with respect to applications in **brain-computer interfaces**
  - Some experience with reverse engineering wheelchair **communication protocols**
  - Created and designed laser cut design to create gimbal to control wheelchair joystick
  - Wrote **assembly** for the **MSP430** to test the gimbal
- **Robotics Club, UCF**
  - Worked on Cypress **PSoC chips** for high performance UART
- Studying **asynchronous circuit design**, working on 8-bit asynchronous CPU for fun
- Hobbyist experience with eletronics design and reverse engineering, guitar electronics repair
- Fluent in **C/C++**, **Python**, **Go**, **Verilog**
- Working knowledge of **x86/x64/MIPS/MSP430** assembly, **Java**, **LaTeX**, **bash**, **MATLAB Kicad EDA** Software Suite, **Multisim**, **Xilinx ISE**
- GitHub user: `https://github.com/cactorium`