

# Kelvin Ly

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UNIVERSITY OF CENTRAL FLORIDA

Cummulative GPA: 3.895

BSEE, ELECTRICAL ENGINEERING

December 2015

## PROFESSIONAL EXPERIENCE

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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
- Wrote portion of **KMIP** client library for **Node.js**
- Heavy emphasis on **test coverage** and **unit testing**

UNIVERSITY OF CENTRAL FLORIDA UNDERGRADUATE RESEARCHER,  
ORLANDO FL

DECEMBER 2014 - APRIL 2015

- Experimented 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** to prototype different algorithms for future use
- Used **emokit Python** library to extract signals from Emotiv EEG headset

GOOGLE SOFTWARE ENGINEER INTERN, CHAPEL HILL NC

MAY 2014 - AUGUST 2014

- Constructed on benchmarking framework for **Skia** rendering engine team
- Built on pipeline to collect and process **hundreds of megabytes** of data **daily**
- Contributed code in **C++**, **Python**, and **Go** for both internal and open source projects
- Wrote front end logic using **JavaScript** to visualize benchmark results

## LEADERSHIP

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**Guitar Club**, LESSONS COORDINATOR

SPRING 2014

- Coordinated lessons between approximately 20 students and teachers
- Organized biweekly meetings

**Tau Beta Pi honors society, Florida Delta chapter**, WEBMASTER

FALL 2014 - SPRING 2015

- Coordinated inductions for 50 members

**Eta Kappa Nu (HKN) honors society, Zeta Chi chapter**,  
CORRESPONDING SECRETARY

SPRING 2015 - PRESENT

- Coordinated engineering talent show showcasing around 10 performers

## PERSONAL EXPERIENCE/SKILLS

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- **UCF Lunar Knights** project, electrical/communications teams
  - Helped with **wireless communication** with **Beaglebone Black**
  - Developed **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 on team for the **Arduino** powered robot
- Senior design project
  - Produced **hardware system designs** for all components
  - Researched into **signal processing** for **feature extraction** with respect to applications in **brain-computer interfaces**
  - Worked on reverse engineering wheelchair **communication protocols**
- **Robotics Club, UCF**
  - Programmed Cypress **PSoC chips** for high performance UART
- Studying **asynchronous circuit design**, working on an 8-bit asynchronous CPU
- Hobbyist experience with electronics design and reverse engineering, guitar electronics repair (10 years experience)
- 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**, **Spanish**, **Linux**
- Experience with **circuit probing**, **oscilloscope use**, **multimeter use**, **Molex crimping**, **through hole soldering**, **transistor amplifier design**, **linear control system design**
- GitHub user: <https://github.com/cactorium>