ROBERT URSUA

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SUMMARY

Senior level Electrical Engineering student looking for a coop/internship position. Experienced in test automation, embedded systems, circuit/PCB design & testing, and developing software tools

EDUCATION

UNIVERSITY OF CALIFORNIA – LOS ANGELES
B.S. Electrical Engineering – Graduating Dec 2018
GPA: 3.823/4.000

CITY COLLEGE OF SAN FRANCISCO
Engineering Transfer 2016
GPA: 4.000/4.000

RELEVANT COURSEWORK

- Data Structures & Algorithms (C++)
- Introduction to Computer Organization (C)
- Circuit Analysis (HSPICE & Multisim)
- Logic Design of Digital Systems
- Digital Signal Processing (MATLAB)
- Probability and Random Processes in EE (MATLAB)

SKILLS / TECHNOLOGIES

EXPERIENCED: LabVIEW, C/C++, Arduino, ARM mbed (RTOS), PADS, EAGLE
USED BEFORE: MATLAB, Python, SPICE, Javascript, HTML, CSS

PROFESSIONAL EXPERIENCE

HARDWARE DEVELOPMENT CO-OP — **Jul – Dec 2017**
Abbott Cardiovascular and Neuromodulation Division

- Currently develops an Automated MRI Compatibility Testing System that characterizes the effects of MRI Gradient Magnetic Fields on Active Implantable Medical Devices (i.e. Pacemakers)
- Designed circuits & PCBs for test signal routing & amplification and for response measurements
- Developed LabVIEW applications that control hardware, process data, and provide GUIs for test operators

PROJECTS

HOT MEALS – LA HACKS 2017 *(Coded in Javascript, CSS, HTML)* — **Apr 2017**

- As a team, created a platform that directed the hungry to the nearest food banks and participating food places
- Implemented map interface, designed pages using CSS, and integrated pages into the Angular framework.
- Awarded "Best Civic Hack" by the City of Los Angeles

MICROMOUSE ROBOT *(Coded in C++, ARM mbed, Designed in EAGLE)* — **Sep 2016 – May 2017**

- As a team, built an STM32F4 based robot that finds the fastest route in a maze
- Designed schematics and PCBs for motor/sensor interfaces, power system, & microcontroller breakout
- Implemented software for motor control, sensor interfacing, PID feedback control, and maze solving algorithm
- Best 1st year Participant, All American Micromouse Competition 2017
- Fastest robot in internal club competition

BRUIN NAV *(Coded in C++)* — **Mar 2017**

- Created a turn-by-turn navigation system that presents the shortest route for trips within Los Angeles
- Implemented path-finding algorithms and optimal data structures for quick query processing

BRUINWALK BROWSER EXTENSION *(Coded in Javascript, CSS, HTML)* — **Dec 2016**

- Built a Chrome extension that adds professor ratings and final grade data to class listings in the UCLA website
- ~3000 weekly users and rated 5.0/5.0 stars in Chrome Store Page

MUSIC VISUALIZER *(Coded in C, Designed in EAGLE)* — **Nov 2016**

- Created an Arduino based device that displays the spectrum analysis results of input audio onto an LED matrix
- Designed circuits for multiplexing the LED matrix and using the MSGEQ7 audio processing chip with an Arduino