BRUNO BOMBASSARO

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EDUCATION

UCLA, *September 2017 – June 2021*
B.S. Electrical Engineering, *GPA*: 3.5
Relevant coursework: Object Oriented Programming, Algorithms & Data Structures, Computer Architecture, DSP with MATLAB, Digital Logic, Semiconductor Physics and Design, Solar Cells, Analog Circuits, Digital Circuits w/ Cadence Virtuoso, Control Systems, Electromagnetism, Photonics, Finance

SKILLS

Hardware: PCB design with Eagle, SMD soldering, oscilloscopes, function generators, multimeters
Programming languages: C, C++, MATLAB
Software: Cadence Virtuoso, Simulink
Spoken languages: English (fluent), Portuguese (native), German (basic)

LEADERSHIP

Open Project Space (OPS) Lead
IEEE at UCLA, *June 2018 – June 2019*

- Oversaw 100+ members of the OPS program, teaching fundamental electrical engineering concepts to freshmen
- Improved project completion rate from 70% to 84%
- Became comfortable with the use of lab equipment to test/debug circuits and learned to simplify technical concepts
- Communicated effectively with other club officers to solve conflicts such as limited lab space usage for people and equipment

EXPERIENCE AND PROJECTS

6-bit Absolute Value Detector (Cadence Virtuoso)
January 2020 – March 2020

- Designed a 1.29GHz absolute value detector utilizing static CMOS with an adder + comparator architecture
- Modified standard ripple-carry adder and utilized pass logic to optimize circuit
- Analyzed resulting layout to obtain delay and energy values
- Layout passed DRC and LVS

Micromouse Project
IEEE at UCLA, *September 2019 – March 2020*

- Develop maze-following robot in team of three
- Utilized CubeIDE to program board in C to read sensors, control motors and debug
- Designed PCB board, developing infrared distance sensor, motor control with an H-bridge and communication circuits

Quadcopter Project
IEEE at UCLA, *September 2018 – June 2019*

- Developed drone in team of four
- Implemented SPI between IMU and STM32F405 microcontroller and I2C between radio module and MCU in mbed IDE with modified C
- Utilized PID algorithm to control drone into a stable hover
- Designed drone PCB in Eagle, which included voltage regulator, motor control, IMU sensing and communication circuits