

Brian Canty

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Education

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

EXPECTED 6/17

Bachelor of Science, Electrical Engineering

- **Cumulative GPA: 3.98**
- UCSB College of Engineering Honors Program: Fall 2013 - Winter 2017
- UCSB College of Engineering Dean's List: Fall 2013 - Winter 2017
- Roger Wood Endowment Recipient 2015-2016
- Edison-McNair Summer Research Grant Recipient 2016

Laboratory Experience

EMBEDDED SYSTEMS

- Designed robust and reliable embedded systems in C through the use of hierarchical finite state automata
- Determined optimal program schedules through use of CPLEX optimizer in PYTHON
- Designed parallel bus interfaces linking processors and peripherals

ANALOG DESIGN

- Designed a switching power amplifier for use in a speaker system, using pulse width modulation
- Implemented custom noise shaping with feedback, simulated with SPICE

INTEGRATED CIRCUIT FABRICATION

- Designed logic circuits and fabricated them using NMOS technology in the UCSB instructional cleanroom

ROBOTICS

- Created interactive control systems through the use of SIMULINK in order to balance/maneuver robots
- Used both linear and nonlinear approaches to design efficient feedback loops

SIGNAL PROCESSING

- Implemented and optimized recursive fourier transforms in MATLAB and C

Activities and Organizations

UCSB HYPERLOOP TEAM

Controls Engineer, Museum of Exploration and Innovation (MOXI) Liaison 2016 - 2017

- Senior Interdisciplinary Capstone Project, as well as subject of Summer 2016 Research
- Designed functioning prototype of pod that levitates with four magnetic levitation motors and a suite of sensors
- Worked alongside Computer and Mechanical engineers; used superior time management/communication skills to meet deadlines
- Used CAD to design printed circuit boards that interface with motors
- Collaborated with Museum of Exploration and Innovation in Santa Barbara to create meaningful exhibit

TAU BETA PI HONORS SOCIETY - CALIFORNIA SIGMA

Corporate Outreach Chair 2015-2016, Vice President 2016-2017

- Communicated with local companies and organizations in order to collaborate on events and generate revenue
- Managed internal communication of organization
- Organized and oversaw free tutoring hours provided by TBP for the College of Engineering

UCSB LITTLE/BIG ENGINEERING PROGRAM

Head Tutor 2016-2017

- Organized groups of underclassmen and upperclassmen in order to facilitate relations between classes
- Organized mentors schedules into free tutoring hours, collaborated with UCSB Tau Beta Pi

Skills

HARDWARE

- Experienced with measurement equipment such as oscilloscope, digital multimeter, function generator
- Trained for cleanroom work, familiar with oxidation furnace, mask aligner, metal evaporator

SOFTWARE

- Coding Languages: C, C++, PYTHON, MATLAB, JAVA
- Experienced with tools such as SIMULINK, SPICE, CPLEX, and kiCAD