Nicole Lin

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Objective

Undergraduate student with 6+ years of experience working on team projects integrating mechanical and electrical systems, with an emphasis on embedded systems design and implementation. Strong verbal and written communication from giving design review presentations and composing technical documentation. Excited to work on projects with impact; looking for full-time hardware and firmware roles starting fall 2021.

Education

Cornell University

MEng, Electrical and Computer Engineering **expected May 2021**

BS, Electrical and Computer Engineering **(GPA: 3.90)** **expected December 2020**

Coursework: Embedded Systems, Foundations of Robotics, Intelligent Physical Systems, Discrete Structures, Operating Systems, Computer Architecture, Computer Networks & Telecomm, Human Robot Interaction

Honors: IEEE Eta Kappa Nu Honors Society, Engineering Dean's List (Fall 2017 - Fall 2019)

Awards: BigRed//Hacks Fall 2019 Best Hardware Hack, BigRed//Hacks Fall 2017 Best IoT Hack

Work Experience

Cornell Rapid Prototyping Laboratory **Spring 2018 - present**

Laboratory Technician

+ Operate laser cutter and 3d printers for university groups, processing over 1000 parts every semester
+ Consult lab users on how to improve designs and optimize both print quality and material usage

Lyft Level 5 **Summer 2020**

Hardware Engineering Intern

+ Designed, documented, and owned the IQC test for a Lyft PCBA, achieving 100% coverage of the board's 31 channels of CAN communications and 15 power I/O using minimal instrumentation
+ Screened 3 boards for use in AV builds, unblocking progress towards public road testing
+ Wrote 5 test scripts in Python, gaining familiarity with SCPI, VISA, OpenHTF, and PCAN API

Boosted, Inc. **Summer 2019**

Firmware Engineering Intern

+ Refactored motor controller code by improving and restructuring PWM and ADC drivers for dsPIC33
+ Tracked over 20 issues related to operational state logic in the Boosted Rev BMS and display
+ Designed and programmed a firmware development PCB that acts as a message router between the computer and the SoCs in Boosted vehicles, communicating over UART, USB, Bluetooth, and CAN

Extracurricular Experience

Formula SAE Electric Vehicle Project Team **Fall 2019 - present**

Electrical Team Lead

+ Designed the ARG20 Electronics Control Unit (ECU), introducing a two-board architecture. These parts are mainly responsible for the vehicle's shutdown and ready-to-drive logic and throttle control
+ Championed new practices that centralized firmware development and board design, significantly reduced board bring-up times, and increased documentation for improved knowledge transfer

Baja SAE Off-Road Vehicle Project Team **Fall 2017 - Spring 2019**

Electrical Sub-team Member

+ Calibrated sensors and wrote data logging script for brakes coefficient of friction and pad wear tests
+ Verified previously designed strain gage amp. board PCB by completing board bring up and testing

Skills

Programs: Altium Designer, EAGLE, SolidWorks, Autodesk Inventor, GrabCAD, HSMWorks, Matlab, LaTeX
Maker Skills: 3D printing, Laser cutting, Soldering, TIG welding, Basic woodworking, Scripting, PCB bring-up
Programming Languages: Python, C, C++, Verilog, Assembly (ARM), Java

References available upon request
U.S. Citizen, will not require sponsorship