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 system design and implementation. Strong verbal and written communication from giving design review presentations and writing technical documentation. Excited to work on projects with impact; looking for full-time hardware and firmware roles starting fall 2021.

Education

Cornell University

BS, Electrical and Computer Engineering **(GPA: 3.86)** **expected December 2020**

Coursework: Human Robot Interaction, Foundations of Robotics, Intelligent Physical Systems, Embedded Systems, Computer Systems Prog., Operating Systems, Computer Architecture, Discrete Structures

Honors: IEEE Eta Kappa Nu Honors Society, Engineering Dean's List (Fall 2017 - Spring 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 cutters and 3d printers for project teams, research groups, and students
+ Consult lab users on how to make improvements to their part designs for optimal print quality
+ Debug operation failures and troubleshoot faulty machines to keep the lab up and running

Boosted, Inc. **Summer 2019**

Firmware Engineering Intern

+ Refactored motor controller code by improving and restructuring PWM and ADC drivers for dsPIC33
+ Tracked over twenty issues related to operational state logic in the Boosted Rev BMS and display
+ Soldered and spliced over ten cables in active use for firmware updates and flashing over CAN
+ 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

Aeris Communications **Summer 2018**

Automotive Engineering Intern

+ Improved automotive simulator by increasing code maintainability, updating capabilities to match new specs, and patching memory leaks; used by quality assurance team immediately after completion
+ Developed a JSON parser for a small-scale embedded systems project using a RTOS

Extracurricular Experience

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

Electronics Sub-team Member

+ Designed the ARG20 Electronics Control Unit (ECU), introducing a two-board architecture. This part is mainly responsible for the vehicle's shutdown and ready-to-drive logic and throttle control.
+ Tested the ARG19 ECU's latching circuit and investigated relay selection to find causes of its failure.

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

Electronics 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
+ Certified in Emerson Lab machine shop (mill and lathe), including reading and making part drawings

Skills

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

References available upon request