

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 technical communication from giving design review presentations and writing documentation.

Excited to work on projects with impact; looking for summer 2020 hardware and firmware internships.

Education -----

Cornell University

expected May 2021

BS, Electrical and Computer Engineering (GPA: 3.85)

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

Work Experience -----

Cornell Rapid Prototyping Laboratory

Spring 2018-present

Laboratory Technician

- + Operate and maintain laser cutter 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

Cornell University, ECE 2300 Digital Logic and Computer Organization

Fall 2018

Teaching Assistant

- + Helped students troubleshoot their microprocessor component designs in Verilog using Quartus
- + Answered questions about course material including timing, FSMs, memory, and circuit logic
- + Graded student assessments, homework, and labs, giving insight into how many solutions exist

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
- + Learned about TCP/IP model and communication protocols such as MQTT and HTTP

Extracurricular Experience -----

Baja SAE Off-Road Vehicle Project Team

Fall 2017-present

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, Matlab, LaTeX

Maker Skills: 3D printing, Laser cutting, Soldering, TIG welding, Basic woodworking, Scripting, PCB bring-up

Programming Languages: C, C++, Verilog, Java, Python