Katie Bradford
Electrical Design Engineer

EXPERIENCE

Shaper Tools
Electrical Engineering Intern - Summer 2018, 2019

Analyzed quotes from several electronics manufacturing services to determine best fit, discussing and negotiating with vendors

Defined system architecture and designed development platform for confidential products

Designed and manufactured electromechanical test fixtures for factory testing, decreasing yield loss and complexity

CUAir: Cornell UAV Team
Electrical Subteam - Fall 2016 - Spring 2020

Worked on interdisciplinary team of engineers to design, build, and test UAV to compete in international search and rescue competition

Designed custom PCBs for catapult control and power regulation

Led subteam of 8 engineers, collaborated with other 6 team leads for 1 semester

MITRE Institute, FFRDC
Software Engineering Intern - Summer 2016, 2017

Reverse engineered CAN bus communication to mitigate risks involving malicious vehicle hacking

Created tool to extract and index geospatial metadata from aerial imagery to create coverage maps

PROJECTS

Carrier Board
CUAir Electrical Subteam

Built motherboard PCB to host NVidia Jetson TX2, Pixhawk Autopilot, power regulation, battery charging, and robotic controls systems

Integrated with 4 electrical designers and other mechanical/software teams for full-system success

T.O.A.S.T
Final Project for Microcontrollers Class

Built robotic system to draw images and text on toast with heat gun on gantry

Wrote C code to control motors, communicate with RaspPi, on Pic32

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EDUCATION

Cornell University - Ithaca NY
B.S. Electrical and Computer Engineering
Spring 2020 - GPA 3.78

M.Eng Electrical and Computer Engineering
Fall 2020

Relevant Coursework
Analog Integrated Circuit Design
Microcontrollers
Microelectronics
Digital Logic and Computer Organization
Human Robotic Interaction

EXTRACURRICULARS

Cornell Rapid Prototyping Lab
Lab Technician - Fall 2016 - Present

Assisted research groups and project teams with design and manufacturing

Operated and debugged prototyping machinery; 3D printers, laser cutter, CNC router

Kessler Fellows Program
Kessler Fellow - 2019

Engineering entrepreneurship focused program for Cornell Engineering juniors to explore the world of startups

Cornell Maker Club
Events Coordinator - 2019-2020

Organized the annual make-athon for 100+ Cornell students

Ran soldering, CAD, and embedded systems skills workshops for Cornell community

SKILLS

CAD	Altium, Solidworks, Fusion 360
SOFTWARE	Python, Matlab, Arduino, LaTex
OTHER	Soldering, 3D printing, laser cutting, technical writing