

STEFEN PEGELS

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EDUCATION

Cornell University, College of Engineering *Ithaca, NY*

GPA: 3.932

Bachelor of Science in Electrical and Computer Engineering - Minor: Computer Science

Expected May 2022

Master of Engineering in Electrical and Computer Engineering

Expected December 2022

RELEVANT COURSEWORK

ECE 3140: Embedded Systems

CS 4414: Systems Programming

ECE 5720: Parallel Computing

ECE 4760: Introduction to Microcontrollers

ECE 4750: Computer Architecture

CS 4620: Computer Graphics

WORK EXPERIENCE

System Test Engineer Intern Viasat Inc. | *Carlsbad, CA*

May 2021 – August 2021

- ▶ Supported development of General Test Automation Framework (GTAF) involved in automating tests for family of radio devices, resulting in a 300% speed increase over manual alternatives
- ▶ Wrote Hardware/Software interaction Python scripts to interface with Link 16 radio firmware controllers
- ▶ Added system of output document generation to replace manual creation of certification literature

Electrical Engineer Intern New Ascent Inc. | *Remote - Maryland, US*

October 2020–February 2021

- ▶ Developed and tested RTOS firmware for a microcontroller sensor system for a suborbital chipsat technology
- ▶ Updated schematic and routed new board layout to increase sensing capabilities by 25%
- ▶ Assisted in power analysis for power system selection and sizing

Recreation Leader I City of San Diego | *San Diego, CA*

March 2017-May 2021

- ▶ Serviced parks, organized events, and created field schedules for the use of city facilities, working with clients and customers

LEADERSHIP EXPERIENCE

Electrical Subteam Lead Cornell Cup Robotics | *Ithaca, NY*

December 2018 – Present

- ▶ Developed collaborative robotics projects to be presented for sponsors and at competitions each year
- ▶ Led team of 10-15 members with weekly meetings, progress reports, design reviews, and evaluations
- ▶ Developed LIDAR and IR distance sensing system for C1-C0 astromech robot with 360-degree vision and 60 fps
- ▶ Remodeled data communication among C1-C0 internal microcontrollers, created central task scheduler for NVIDIA Jetson

Teaching Assistant Intro to Computing using Python | *Cornell University, Ithaca, NY*

August 2019 – Present

- ▶ Ran labs, held consulting hours, tutored students, and graded exams and assignments
- ▶ Lab section lead organizing in person discussions during COVID-19
- ▶ Worked an average of 5-8 hours per week for all course duties

PROJECT EXPERIENCE

Wifi Radio | *San Diego, CA*

June 2020 – August 2020

- ▶ Designed DAC cape for use with BeagleBone Black, utilizing I2S stream from the internet, with device tree overlay in Linux

Multicore Processor | *Cornell University, Ithaca NY*

October 2020-December 2020

- ▶ Created and tested multicore processor in Verilog capable of translating C functions into ISA and executing them

CAMPUS INVOLVEMENT

Cornell Maker Club *Member | Ithaca, NY*

September 2018 – Present

Cornell Audio Engineering Society *Member | Ithaca, NY*

September 2018 – Present

Cornell University Program Board *Member | Ithaca, NY*

September 2018 – Present

Cornell IEEE Electrical Engineering Organization *Member | Ithaca, NY*

September 2019 – Present

SKILLS

- ▶ Programming and Testing in C, C++, Python, TypeScript, CUDA
- ▶ Autodesk EAGLE, Altium PCB Design
- ▶ SoC Raspberry Pi, TI CC1310 (Arm Cortex-M3) with I2C/SPI/UART and RTOS programming
- ▶ Linux Environment, Git, Perforce
- ▶ Soldering and electrical wiring/simulation expertise in LTSpice
- ▶ Verilog RTL and FPGA Design and Simulation
- ▶ OpenMP API, OpenMPI library
- ▶ Arduino, Teensy, PIC32 Microcontrollers
- ▶ Oscilloscope, Spectrum Analyzer, test equipment

INTERESTS: Rock Climbing, Backpacking, Tennis, Running, Weightlifting, Classical Guitar, Cooking, Movies