

# STEFEN PEGELS

## EDUCATION

**Cornell University, College of Engineering** *Ithaca, NY*

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

Master of Engineering in Electrical and Computer Engineering

*GPA: 3.932*

*Expected May 2022*

*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