

# JACKSON SPEED KOPITZ

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🌐 <https://jacksonkopitz.github.io/website/>

📍 Ithaca, NY

## EDUCATION

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### Master of Engineering, Systems Engineering

#### Cornell University, College of Engineering

📅 Expected Dec 2020

📍 Ithaca, NY

- GPA: 3.8, Software Systems Specialization
- *Current Enrollment:* Algorithms, Machine Learning, Project Management, Entrepreneurship for Engineers
- *Relevant coursework:* Computer Vision, Model Based Systems Engineering, Systems Analysis Behavior & Optimization

### Bachelor of Science, Electrical and Computer Engineering

#### Cornell University, College of Engineering

📅 May 2020

📍 Ithaca, NY

- GPA: 3.5, Computer Science Minor
- *Relevant coursework:* Object-Oriented Programming & Data Structures, Functional Programming, Operating Systems, Computer Architecture, Embedded Systems, Digital Logic & Computer Organization, Probability & Inference for Random Signals & Systems

## PROJECTS

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### Pedestrian Wayfinding in Downtown Ithaca

📅 January 2020 – Present

- Designing a wayfinding system in Downtown Ithaca to increase resident and visitor foot traffic and decrease carbon emissions

### AirBass

📅 August – December 2019

- Created an air bass guitar that allows users to play distinct notes by imitating the finger movement of a real bass guitar player
- Wrote a C program that read information from beam break sensors, flex sensors, and an ultrasonic distance sensor to play notes

### Tree Irrigation System

📅 January – May 2019

- Designed and built a system with a Raspberry Pi to maintain ideal water pressure in a tree's transport system
- Calculated how much water to deliver to the tree by using weather forecast data and tree water pressure

### Autonomous Mapping Robot

📅 August – December 2018

- Fabricated a robot that could navigate a maze, transmit robot and wall locations to a GUI, identify shapes and colors, and detect audio and infrared signals

## SKILLS & INTERESTS

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### Programming Languages and Technologies

- Python, Java, OCaml, C, JavaScript, TypeScript, React, Node.js, HTML, CSS

### Technical Skills

- Vitech CORE, SysML, PCB Design, Eagle, Git, Soldering, Composites, SolidWorks, 3D Printing, LaTeX, Microsoft Office

### Interests

- Sustainability, Camping, Home Brewing, Squash, Music, Hebrew, French, German, Yiddish, Skiing, Traveling, Sailing, Dogs

## EXPERIENCE

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### Systems Engineering Intern

#### Outrider

📅 June – August 2020

📍 Golden, CO

- Developed system functionality and architecture by creating System Design Documents (SDDs) and collaborating with engineering and product teams
- Established processes using CORE for how the Outrider system responds to yard services
- Founded the Outrider Green Team and led company-wide sustainability initiatives

### Full Team Lead

#### CUSail - Cornell Autonomous Sailboat Team

📅 Aug 2016 – June 2020

📍 Ithaca, NY

- Led an engineering project team of 30 undergraduates to design and manufacture an autonomous robotic sailboat
- Designed the deck of the sailboat using CAD, manufactured the components with carbon fiber, and implemented a waterproofing system to keep the internal electronics dry

### Co-Team Lead

#### Cornell University Sustainable Design

📅 Aug 2019 – Present

📍 Ithaca, NY

- Optimizing and redesigning the City of Ithaca parking garage system
- Reducing emissions associated with excess driving in search of parking using Systems Design Thinking and Systems Engineering modeling tools

### Electrical Engineering Intern

#### Northrop Grumman Corporation

📅 June – Aug 2018

📍 Redondo Beach, CA

- Performed manual & automated calibrations on measurement & test equipment such as oscilloscopes, power supplies, & digital multimeters

### Introduction to Computing Course Consultant

#### Cornell Computing and Information Science

📅 Aug – Dec 2017

📍 Ithaca, NY

- Held office hours, led recitation, graded assignments and exams

### Student Supervisor

#### The Cornell Store

📅 2016 – 2020

📍 Ithaca, NY

## ACTIVITIES

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Cornell Vegan Society

Cornell University Big Red Bands

Blue Stars Drum and Bugle Corps

Pacific Crest Drum and Bugle Corps