

Corey Cochran-Lepiz

ELECTRICAL AND COMPUTER ENGINEER

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Education

Olin College of Engineering

Needham, Massachusetts

CANDIDATE FOR B.S. IN ELECTRICAL AND COMPUTER ENGINEERING

May 2021

- Recipient of 4-year, 50% Tuition Olin Merit Scholarship

Experience

Impossible Aerospace

Santa Clara, California

ELECTRICAL ENGINEER INTERN

Jun. 2020 - Present

- Currently testing different electronics and architectures for an in-house camera solution.
- Designed a new payload controller board to interface between several systems on the aircraft.
- Designed and tested production cell tester for verifying healthy state of charge of new cells.

ELECTRICAL ENGINEER INTERN

May 2019 - Aug. 2019

- Owned, designed, and tested a PCB for a quadcopter handset using Altium and LTspice.
- Designed, simulated, and chose components for a buck-boost power supply for robust charging using LTspice.
- Measured discharge curves using a battery data capture system for the purpose of building a battery model.

FSAE Electric - Olin Electric Motorsports

Needham, Massachusetts

SENIOR ELECTRICAL ENGINEER

Sep. 2017-Present

- Improved and tested the LTC-based battery management system for safety and functionality of the battery pack.
- Developed on the fly troubleshooting proficiency with PCB prototyping and firmware.
- Collaborated on PCB packaging and electrical integration on tightly integrated projects such as the dashboard and the 7.1kWhr battery pack.

ELECTRICAL DESIGN LEAD

Jun. 2018 - Jun. 2019

- Spearheaded a team of students to design, fabricate, and test an electric race car for the Formula SAE competition.
- Coordinated system level architecture design decisions and implementation of the vehicle.
- Facilitated documentation use and availability to all members on the team via Confluence.

Olin Rocketry

Needham, Massachusetts

ELECTRICAL ENGINEER

Jan. 2018 - Jun. 2018

- Founded the avionics subteam to design a flight computer responsible for telemetry and apogee detection.
- Worked under an accelerated timeline with strict design requirements.

Projects

- 2020 **LED Driver:** Designed, simulated, and tested a current-controlled Buck using PLECS, and MATLAB for control theory.
- 2020 **Magnetic Levitation:** Created and simulated the control loops for levitating a magnet using MATLAB and Python.
- 2019 **Joe Knows:** Wrote a proposal for a beacon-app system we developed to help riders who are blind find bus stops.
- 2018 **Analog DC Motor Controller:** Modelled an analog DC motor controller using MATLAB and Mathematica.
- 2018 **Coffee Bar:** Ran a coffee bar serving and teaching people how to make milk-based espresso drinks.

Skills

Software

Altium, Kicad, Confluence, PLECS, LTspice, Google Sheets, Solidworks, Adobe Illustrator

Languages

Python, C, MATLAB, Arduino, Git, LINUX command line, \LaTeX , Spanish

Proficiencies

Arbin test equipment, EDA, Rapid Prototyping, Iterative Design, User Oriented Design, Data Visualization