

# **Robert L. Whitney**

3 Walnut Hill Dr. , Chester, NJ, 07930

[rw429@cornell.edu](mailto:rw429@cornell.edu) || Cell : (908) - 894 - 3896 || [My Portfolio](#)

## **Education:**

### **Cornell University**

*Master of Engineering in Mechanical & Aerospace Engineering*

*Bachelor of Science in Mechanical & Aerospace Engineering*

Ithaca, NY

2020

2016-2020

## **Skills:**

### Advanced

Matlab • Simulink • Arduino • [Analysis and Design of RC Quadcopters](#) • Multirotor Piloting •  
Mechatronics Sensors and Actuators • XFLR5 •  
Fusion 360

### Intermediate

Autodesk • Java • Machine Shop Training  
(Lathe, Milling, GD&T) • Python

## **Specialized Courses:**

Fast Robots • Intelligent Sensor Planning and Control • Design Failure Mode Analysis • Autonomous  
Mobile Robots • Multivariable Control Theory • Feedback & Control Systems • Automotive  
Engineering • Experimental Applications of Mechanical Structures • Intermediate Dynamics •  
Mechatronics

## **Engineering Experience:**

### **Cornell University: SIOS Laboratory**

Ithaca, NY

*CCAT-p Research Team: Controls Subteam Engineer*

Summer 2019-Present

- Implemented mechatronics hardware and software for a high precision metrology robot
- Programmed in Arduino IDE, Python, and Matlab for localizing, actuating, and wireless communication
- Collaborated with 3 other subteams (16 engineers total) to develop the chassis and meet performance specifications

### **Independent Senior Design Project**

Ithaca, NY

[Simulation, Analysis, and Design of an RC Aircraft Autopilot](#)

Spring 2020-Present

- Designed and modeled an airframe in Fusion 360
- Performed an airfoil and control surface simulation in XFLR5 fluid simulation
- Developed a 6DoF simulation of the aircraft and feedback control systems in Matlab and Simulink
- Implementing the autopilot system in hardware with Arduino

### **MAE 5780 : Autonomous Mobile Robots**

Ithaca, NY

Spring 2020

- A graduate course on autonomous localization, mapping, SLAM, path planning, and navigation
- Programmed in Matlab to test algorithms on hardware with iRobot Roombas

## **Accomplishments:**

Cornell Division I Cross Country/Winter/Spring Track • Voorhees 2016 Male Student Athlete of the Year  
• B.S.A. Eagle Scout • Voorhees 2016 Cross Country/Winter/Spring Track Team Captain