

# **Robert L. Whitney**

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## **Education:**

### **Cornell University**

*Master of Engineering in Mechanical & Aerospace Engineering*

Ithaca, NY

2020-Present

*Bachelor of Science in Mechanical & Aerospace Engineering*

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

## **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