

Robert L. Whitney

rw429@cornell.edu || [Portfolio](#)

Education:

Cornell University

Ithaca, NY

Master of Engineering in Mechanical & Aerospace Engineering - GPA : 3.98 2020

Bachelor of Science in Mechanical & Aerospace Engineering - GPA : 3.37 2016-2020

Skills:

Matlab • Simulink • Arduino • [Analysis and Design of RC Quadcopters](#) • Multirotor Piloting •
Mechatronics Motors, Sensors, and Actuators • XFLR5 • Fusion 360 • Autodesk • Java • Machine Shop
Training (Lathe, Milling, GD&T) • Python • C/C++ • Data Structures

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 2019-2020

- 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 for navigation and control

MAE 5180 : 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 • B.S.A. Eagle Scout