

Oren Anderson

EDUCATION

University of Florida

Bachelor of Science in Mechanical Engineering, Minor in Electrical Engineering

GPA: 3.96/4.00

2019 - 2023

EXPERIENCE

Teaching Assistant, August 2020 - Present

Dynamics and Control System Design Lab (EML 4312C), January 2022 - Present

- Hold lab hours for students to help with hardware debugging and programming (Labview)

Mechanical Engineering Design 3 (EML 4502), January 2021 - December 2021

- Assist students with hardware design and programming (Python/gcode)

Intro to Aerospace (EAS 2011), August 2020 - December 2020

- Hold weekly office hours for MATLAB debugging and course questions for 140 students

Northrop Grumman Corporation, May 2022 - July 2022

Guidance, Navigation and Control

- Developed Matlab scripts for running a DO-330 tool qualification using the DO qualification toolbox
- Reviewed unit tests of fundamental code structures as well as high level controller code in Simulink
- Performed handling quality assessments with pilots in a simulator environment

Procter & Gamble, May 2021 - July 2021

Process Development, Programming and Robotacist

- Created a mathematical model of a liquid filter for performance prediction and validation
- Programmed a Python visualizer using Dash and Plotly for acquiring data from gPROMS models
- Programmed a Universal Robot arm (UR10) to get/send commands from a Python script for pick and place

SYBORGS Lab - Synthetic Biology and Controls Research, January 2020 - Present

Continuous Culture Automation Lead

- Designed an Arduino controlled bioreactor to simulate microgravity and other extreme conditions

Growing Beyond Earth Maker Contest, November 2020 - August 2021

Mechanical Design Lead of the University of Florida Team (SIMoN)

- Created a Solidworks model of the hydroponics system including modeled lettuce plants
- Designed a hydroponic system subject to the constraints of a zero-g environment
- Won the university competition in 2021

Formula Society of Automotive Engineers (FSAE) Gator Motorsports, August 2019 - March 2020

Vehicle Controls Lead December 2019 - March 2020

- Assembled and programmed a custom embedded system in C++ for the clutch control proof of concept
 - Designed and verified the pneumatic piston mount and cable tether for clutch control
 - Verified heat shield mount weldability and runner stud wrench accessibility within SolidWorks
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SKILLS

Programming:	Python (Dash, Plotly, pyqt, fbs), AVR Assembly, C++ (qt, ui design), MATLAB (controls toolkit), Java, Robot Pathing, Feedback and Feedforward Control Systems
Software:	SolidWorks, PyCharm, VSCode, QTCreator, IntelliJ, Autodesk Inventor, Microsoft Office
Experience with:	CNC Manufacturing (3 and 5 axis), FDM 3D-Printing, AVR & ARM architecture
Qualifications:	Secret Level Government Clearance, CSWA (Certified SOLIDWORKS Associate), CSWA-AM (Additive Manufacturing), Level 1 STK (Systems Tool Kit)

Website: orenanderson.com

GitHub: github.com/Raviolifun