



Jaxton Monterey Willman

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EDUCATION

Bachelor of Science in Mechanical Engineering
Minor in Computer Science and Information
University of Florida, Gainesville, Florida

May 2022
GPA: 3.44
Cum Laude

SKILLS

- Software: Certified SolidWorks Associate, Microsoft Office Specialist, GitHub, OpenSim, Simerics-MP+ (formerly Pumplinx), SIMULIA Abaqus FEA, Granta
- Coding: MATLAB, C++, C, Python, Java, Assembly (LEGv8), HTML, CSS, Yacc/Lex
- Machining: Lathes, mills, drill presses, tapping, reaming, band saws, table saws, grinders, brake presses, MIG and TIG welding, spot welding

RESEARCH

Saxena Lab for Neural Control

2021 – 2022

- Worked on system identification and control of anatomically accurate biomechanical human limb models
- Investigated neurological disorders in a model of the sensorimotor control system
- Developed scripts to run MATLAB and OpenSim code on the UF HiPerGator supercomputer

University Scholars Program

2021 – 2022

- 1 of 200 students out of 60 majors awarded the UF University Scholars Program scholarship for undergraduate research
- Presented my research to more than 400 other undergraduate researchers and professors at the UF Research Symposium

Neuromatch 4.0 Conference

December 2021

- Selected to present my research on system identification and control of anatomically accurate biomechanical human limb models

UF NVIDIA AI for Science Bootcamp

October 2021

- Placed first out of 13 teams in both deep learning hyperparameter optimization challenges

EXPERIENCES

Thermal Sciences and Design Lab

2021 – 2022

- Mentored students in the laboratory with experiments, data analysis, and report writing
- Graded and provided feedback on student reports to improve engineering communication skills
- Worked with the professor to revise the course documents and website
- Held Cummins diesel engine teardown sessions for students and faculty training

Department of Mechanical and Aerospace Engineering

2021 – 2022

- Peer advisor for over 1800+ students

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| <ul style="list-style-type: none"> • Assisted students with course selection, scheduling, and career planning using my experience • Chosen specially to conduct the behavioral interview to hire Advisor 1 candidates for the department | |
| Mechanical Engineering Capstone Project | 2021 – 2022 |
| <ul style="list-style-type: none"> • Part of eight-member team tasked with creating a heliostat capitalizing on small size innovations for an industry partner • Created a company and filed an IP disclosure with the University of Florida • Successfully designed a small size heliostat under \$100 meeting DOE guidelines • Leveraged decision matrices to choose an optimal design to meet customer constraints | |
| Design and Manufacturing Laboratory | Spring 2020 |
| <ul style="list-style-type: none"> • Designed concepts for a robot to manipulate balls from a tree into a bucket while navigating a course • Numerically compared team member concepts with decision matrices to validate design choices • Modeled robot subassemblies and off-the-shelf parts in SolidWorks to create a dynamically moving robot • Created drawings with proper dimensional tolerancing, GD&T and manufacturing notes • Manufactured and assembled robot for competition | |
| UF Solar Gators | 2018 – 2020 |
| <ul style="list-style-type: none"> • Designed the chassis in SolidWorks weldments for manufacturing with VR3 • Reduced the weight of critical suspension components with topology optimization • Integrated new solar car controls into an improved version of the steering wheel • Coordinated the effort to enhance solar car system communications with CAN 2.0b and STM MCU's • Orchestrated new member retention program with custom mini-engineering projects | |
| UF Gator Game Jam | July 2021 |
| <ul style="list-style-type: none"> • Team had 39 hours to focus on the art, design, and development of a game • Designed core gameplay mechanics and implemented scripting and animations in Unity • Implemented project management and revision tracking with Trello and GitHub | |
| Kyoto University Japan – Study Abroad | Summer 2022 |
| <ul style="list-style-type: none"> • Collaborated with Kyoto University students on engineering topics • Learned performant programming in Python • Explored cross-cultural design | |