Jaxton Monterey Willman

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EDUCATION

Bachelor of Science in Mechanical Engineering May 2022
Minor in Computer Science and Information; Minor in Biomechanics GPA: 3.48
University of Florida, Gainesville, Florida

SKILLS

- Software: Certified SolidWorks Associate, Microsoft Office Specialist, OpenSim, Granta, Simerics-MP+ (formerly Pumplinx), SIMULIA Abaqus FEA, and Unity
- Coding: MATLAB, C++, C, Python, Java, Assembly, 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 – Present
- Working on system identification and control of anatomically accurate biomechanical human limb models
- Investigating neurological disorders in a model of the sensorimotor control system
- Developing 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 research

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

Mechanical Engineering Capstone Project 2021 – 2022
- Team of 8 members 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 meeting customer constraints

Design and Manufacturing Laboratory Spring 2020
- 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

- 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

Department of Mechanical and Aerospace Engineering Peer Advisor 2021 – Present

- Responsible for advising 1800+ peers
- Chosen to conduct the behavioral interview of Advisor I candidates

UF Gator Game Jam July 2021

- Team had 48 hours to develop a game from scratch
- Designed core gameplay mechanics and implemented scripting and animations in Unity