Jaxton Monterey Willman

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EDUCATION

Bachelor of Science in Mechanical Engineering May 2022
Minor in Computer Science and Information Engineering GPA: 3.44/4.00
University of Florida, Gainesville, Florida Cum Laude

Computer Science Study Abroad Jun – Aug 2022
Kyoto University, Kyoto, Japan

SKILLS

Software: SolidWorks (CAD), Microsoft Word, Excel, PowerPoint, Linux, GitHub, OpenSim, NI LabVIEW VI, SIMULIA Abaqus FEA, Simerics-MP+, Granta

Coding: MATLAB, C++, C, Python, Java, Assembly (LEGv8), HTML, CSS, JavaScript, Yacc/Lex

Manufacturing: Lathes, mills, drill presses, tapping, reaming, finishing, band saws, table saws, grinders, brake presses, MIG and TIG welding, spot welding, 3D printing

ENGINEERING EXPERIENCES

Saxena Lab for Neural Control | *Undergraduate Researcher* Feb 2021 – Jun 2022

- Applied controls theory to motor control of a biomechanically accurate human arm model
- Investigated neurological disorders in a model of the sensorimotor control system
- Developed scripts to automate data analysis and processing on the UF HiPerGator supercomputer
- Presented my research to more than 400 other undergraduate researchers and professors at the UF Research Symposium and Neuromatch conference

Thermal Sciences and Design Lab | *Teacher Assistant* Dec 2021 – May 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
- Revised course documents and website weekly with the professor to improve the student experience
- Trained faculty and students on Cummins diesel engine teardown sessions

Department of Mechanical and Aerospace Engineering | *Peer Advisor* Feb 2021 – May 2022

- Communicated with over 300 students to assist with college planning and career development
- Conducted behavioral interviews to hire Advisor 1 candidates for the department

Mechanical Engineering Capstone Project | *Team Member* Aug 2021 – May 2022

- Designed a heliostat capitalizing on small-size innovations under $100 to meet DOE guidelines to meet customer constraints for an industry partner as part of an eight-member team
- Leveraged decision matrices and binary trade studies to choose an optimal design
- Created drawings with GD&T according to ASME Y14.5 and manufactured heliostat
- Achieved functional verification closures of the heliostat through rigorous performance and environmental testing and code reviews

UF Solar Gators | *Mechanical/Electrical/Systems* Feb 2018 – Apr 2020

- Integrated new solar car controls into an improved version of the steering wheel
- Coordinated and managed the effort to enhance solar vehicle subsystem communications with CAN 2.0b and STM MCUs
- Designed the chassis in SolidWorks weldments for manufacturing with VR3
- Reduced the weight of critical suspension components by 20% with topology optimization
- Orchestrated new member retention program with custom mini-engineering projects