Matthew Hopwood

Orlando, FL

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Enthusiastic and detail oriented masters aerospace student adept in working with engineers and managers at multiple levels to efficiently achieve optimal results. Expirence in modeling, simulation, and analysis on both structural and aerodynamic projects. Outstanding problem-solving, communication, and analytical skills. Strong foundation in aerodynamics, thermodynamics, and structural dynamics; systems design and testing; flight mechanics and controls; and 2D and 3D CAD design tools. Most of all: a quick learner with an insatiable desire to succeed in industry.

SKILLS

Computational Analysis

- Star-CCM+, ANSYS Fluent, Nastran, SolidWorks; (Computational Fluid Dynamic (CFD) Analysis and Finite Element Analysis (FEA))
- XFOIL, XFLR5, Orbital STK AGI

Computer-Aided Design (CAD)

SolidWorks, Autodesk Inventor

Coding

MATLAB, Python, Mathcad, C

Additional

LabVIEW, Microsoft Office (Excel, Word, Access, Outlook, PowerPoint), 5S

EXPERIENCE

Engineering Intern Matthews Environmental Solutions | Apopka, FL | October 2020 – Present

- Led product redesign project efforts based on customer input/requirements
 - Developed CAD model; Verified design by free body diagram and finite element analyses
 - Built, maintained supplier relations to outsource product manufacturing labor
- Implemented 5-S practices on steel storage area, with focus on sustainability
- Developed drawing deck for product prototype through collecting its current dimensions

Intern

Singhofen & Associates Inc. | Orlando, FL | September 2018 – December 2019

- Created a Python-based model to optimize rainfall data analysis/processing
 - Included rewriting current processing program to avoid memory leak caused large quantity of data
- Finalized stormwater data into professional figures/reports

EDUCATION

University of Central Florida

Masters of Science in Aerospace Engineering: Thermofluid Aerodynamic **Systems Design and Engineering**

January 2021 – Present

University of Central Florida

Bachelor of Science in Aerospace Engineering

August 2016 - May 2020

- In-Major GPA: 3.31 | UCF GPA: 3.21
- Pegasus Gold Scholarship | Bright Futures Florida Medallion Scholar | Deans List Senior

RELEVANT PROJECTS

Small Jet Engine with EDF Intake | July 2020 - Present

- Utilizing Electronic Ducted Fan (EDF) as air intake for small jet engine
- SolidWorks model created, working on performing airflow analysis
- Programmed Python-based model for quick engine parameter calculations

AIAA Design, Build, Fly (Senior Design Project) | August 2019 – May 2020

- Designed & Built banner-carrying plane (5' wingspan)
- Created 3D model, Performed CFD (fluid) analysis, used for design optimization
- Programmed Python-based model for initial parameter calculations, was working on code for automatic optimization until project cancelled due to COVID.