Matthew Hopwood

Orlando, FL

407.558.0473
matthew.hopwood@knights.ucf.edu
www.matt-hopwood.com

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. Complex 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. Passionate drive to apply, aquire, and grow my skills in the 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 static free body diagram calculations and finite element analyses
  - Built, maintained supplier relations to outsource product manufacturing labor
- Developed drawing deck for product prototypes
- Implemented 5-S practices on steel storage area, with focus on sustainability

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

- Current Coursework: Mathematical Methods in Aerospace Engineering

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 – October 2020

- Designed small jet engine using an electronic ducted fan (EDF) as air intake
- SolidWorks model created, ANSYS Fluent used to analyze aerodynamics
- Programmed Python-based model for quick engine parameter calculations
- Plan on building/testing in future when time and capital is more readily available

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.