Eyob Ghiday

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Website LinkedIn Github

SKILLS: Modeling and Simulation, Performance Testing and Analysis, Aeronautics, Aerospace, Systems Engineering, Aerodynamics, Vibrations, Applied Math, Fluid Dynamics, Spacecraft, Material Science, Flight, Aircraft systems, Optimization, Aerostructures, Additive Manufacturing, Robotics, Rockets, Satellites, Turbulence Modeling, Data Science, XFLR5, MATLAB, STK, PINN, Python, LaTeX, dSpace, ImajeJ

EDUCATION

Masters in Mechanical and Aerospace Engineering.
Illinois Institute of Technology – Chicago, IL. **May 2023**

Bachelors in Aerospace Engineering.
Illinois Institute of Technology – Chicago, IL. **May 2022**

PROFESSIONAL WORK EXPERIENCE

Modeling & Simulation Engineer Analyst – JHU Applied Physics Lab, Laurel, MD **Since Aug 2023**

- **Associate Professional Staff:** Building simulation pipelines using Matlab for medium to high fidelity models. Testing and analyzing real world events for various government studies.
- Performance and System Analyst for the applied physics lab proprietary software in Matlab.

Student Design Build Fly Chief Engineer – AIAA Chapter at Illinois Tech **Sep 2019 to May 2023**

- **DBF Lead Engineer:** As the main lead I manage all four sub-teams, coordinate effective communication, and handle all the responsibility from designing, sizing and interpreting constraints of the AIAA-DBF competition.
- **Aerodynamics Team Lead:** Analyze, design, and fabricate the main wing and tail of RC planes for the annual AIAA-DBF competition. I use various tools like XFLR5, Simulink, and Python for selecting airfoils and determining the sizing, trade studies and aerodynamic properties of the plane.
- **Manufacturing Team Lead:** I design & CNC the wing, Laser cut carbon fiber fuselage and surface controls.

Additive Manufacturing Research Internship – NSF, *Chicago, IL* **May 2021 to Sep 2021**

- Managed a team of 4 colleagues analyzing Ti-64 defects and porosity formation using ImageJ and Python.
- Research: Laser Powder Bed Fusion of Titanium-64 Alloy, Inconel-718 and Stainless Steel. [article].
- Completed laser 3D printing, XRD Analysis, EBSD, Microscopy and published a paper on ScienceDirect.

Project Manager – Environmental Eco Solutions, *Schaumburg IL* **July 2019 to May 2020**

- Led a team of solutions architect and chain specialist to install and maintain HVAC systems, additionally complete EPA Property Rehabilitation, and oversight licensing.
- Prepare agile project plans and maintain the plans to see if the proposed model is properly utilized.

Engineering Internship – C.E. Niehoff & Co, *Evanston, IL* **May 2017 to Sep 2017**

- Coordinated all aspects of production, manufacturing methods, fabrication, and operation of car components.
- Performed electrical hardware testing for several different brushless alternators.
- Analyzed fatigue defects and vibrational damage of several machine parts.