**Rowdy Raider**

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**EDUCATION**

***Master of Science: Mechanical Engineering*** May 2022

***Bachelor of Science: Material Science and Engineering*** May 2020

Wright State University Honors Program GPA: 3.5 Dayton, OH

**RELEVANT COURSEWORK**

* Metallography
* Mechanics of Materials
* Engineering Polymers
* Materials Characterization
* Nano-scale Science and Engineering
* Energy Materials
* Mechanical Behavior of Metals
* Engineering Ceramics
* Material Selection and Failure Analysis
* Structures and Properties of Materials
* Nano-scale Science and Engineering
* Capstone Design I and II

**SKILLS**

***Programming Languages***: MATLAB, LabVIEW ***Software***: SolidWorks, ImageJ, Vibration View

***Machinery***: Tensile Test, Polishing Equipment, High Cycle Fatigue, Scanning Laser Vibrometer

**WORK EXPERIENCE**

***Mechanical Engineer***, Ohio Aerospace Institute, Dayton, OH May 2018 – Present

* Analyzed CT images of additively repaired parts to predict where failure would occur
* Conducted fatigue tests and analyzed fractures of different additively manufactured specimens
* Used Scanning Laser Vibrometer to excite specimens and show bending mode shapes

***R&D Engineering Intern***, Polymet Corp., West Chester, OH May 2018 – August 2018

* Polished samples of metal alloy wires that were being sold for welding applications to be analyzed, photographed the samples with an optical microscope, tested the microhardness
* Analyzed test welds on steel plates with use of dyes to check for cracks and porosity
* Aided in the development of new alloy formulations for specific customer needs and requests using spreadsheets that calculated fill volume, mass, and price for the theoretical formulation

**PROJECT EXPERIENCE**

***Design and Build a Thrust Vectoring System for a Micro-Jet Engine*** August 2019 – May 2020

* Sponsored by the Aerospace Propulsion Outreach Program (APOP) at WPAFB
* Worked on a team of four to design and fabricate a system to redirect the thrust of JetCat P-100x
* Helped design a device that would prevent windmilling in the turbine blades while turned off
* Used data acquisition hardware to record and analyze information about engine while running
* Designing was completed using SolidWorks, engine operation was recorded using LabVIEW
* Cold tested with 3D printed thrust vectoring system using compressed air multiplier
* Researched and chose material that would best fit the application and price range for project

***Design and Build a Cardboard Chair Project*** November 2016

* Designed a chair that could withstand 300 pounds using SoildWorks part assembly
* Modeled 3 pieces, two side panels and one seat, using hand drawings and SolidWorks
* Built the chair completely out of corrugated cardboard panels and large cardboard tubes

**ACTIVITIES**

***Attendee, National Congress of Future Scientists and Technologists, Harvard University*** 2015