

# AUGIE COLLINS

2031 Fairview Ave. E Apt. B, Seattle, WA 98102 • (614) 378-4971 • augiecollins1@gmail.com

## EDUCATION

### University of Washington

Seattle, WA

Master of Science in Mechanical Engineering

*Anticipated December 2022*

- Mechanics, Materials and Manufacturing: Composites Concentration
- Courses: Fatigue Materials, Advanced Composite Structural Analysis, Structural Optimization

### University of Notre Dame

Notre Dame, IN

Bachelor of Science in Aerospace Engineering

*May 2019*

- Senior Design Project: Fully operable 6 ft. wing span RC plane designed for optimal climb rate/glide duration

## SKILLS

**Computer:** PTC Creo (5+ years), SolidWorks (3+ years), CATIA, Matlab/Simulink (5+ years), LabVIEW, NASTRAN, ENOVIA VPLM, IVT, GitLab, Jira, Confluence, Microsoft Office Suite

**Other:** CFD, GD&T (ASME Y14.5), Composite Design, FEA, Project Management

## ENGINEERING WORK EXPERIENCE

### Starfish Space

*January 2022 to Present*

#### Graduate Robotics Intern

- Develop prototypes for Otter space tug capture system to perform first-of-its-kind satellite servicing on-orbit
- Perform static and modal analyses in SolidWorks Simulation with large assemblies to validate designs

### Pure Watercraft

*June 2021 to September 2021*

#### Mechanical Engineering Intern

- Perform CFD simulations and validate results through testing for electric outboard motor design optimization
- Model outboard tail cone designs to reduce drag generated by the propeller throughout the full speed envelope

### The Boeing Company

*August 2019 to July 2020*

#### Structural Design Engineer within the Propulsion Rotation Program

##### 777X Nacelle Actuation Systems Design

*August 2019 to May 2020*

- Project lead for the design, analysis, and prototyping of a new mechanical actuator for large cost saving benefits
- Perform static analyses of components using both classical FEA and NASTRAN software
- Use CATIA V5 for general 3D modeling, 3D prototyping, and 2D drawing generation to meet customer needs
- Support 777X flight test through a liaison/manufacturing engineering role to supervise factory technicians

#### Fuels Tooling and Analysis

*May 2020 to July 2020*

- Daily tasks include debugging new and preexisting code errors for volumetric tank generation, as well as documenting processes to increase the knowledge pool in our team wiki
- Improve Boeing Fuels MATLAB Toolkit through code changes using GitLab version control software

### Inventus Power

*June 2018 to August 2018*

#### Mechanical Design Engineering Intern

- Run static simulations to eliminate failures in the ballistic proof CWB battery pack for U.S. Army operations
- Design a unique injection molded battery casing from concept to production for the HeartWare MVAD system

## RESEARCH & EXTRACURRICULARS

### University of Notre Dame Aerospace and Mechanical Engineering Department

*August 2017 to May 2018*

#### Research Assistant – Mars Imagery Analysis

- Analyze the low-speed flow of particles over 3D barchan dunes using CFD, particle image velocimetry (PIV)
- Use DaVis software for image post-processing to determine the velocity of particles for flow visualization
- Replicate and visualize the formation and motion of craters on Mars using a three-camera PIV technique

### Notre Dame Rocketry Team

*August 2016 to May 2018*

#### Team Member

- Model 3D designs of CRAM (Compact Removable Avionics Module) with the rocket recovery team
- Present a proposal to NASA for our rocket and travel to the student launch competition each year

## RELEVANT CERTIFICATIONS

### University of Washington PCE

Seattle, WA

Design and Analysis of Modern Aircraft Structures

*October 2019 to June 2020*

- Classes in: Fatigue & Fracture Mechanics, Strength of Materials, Classical FEA Analysis

### Edmonds Community College

Edmonds, WA

Applied Composites

*January 2020 to February 2020*