TYLER GUERTIN

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OBJECTIVE

Future Aeronautical Engineering graduate with proven analysis and engineering simulation experience. Well versed in team dynamics and development. Seeking a position to leverage my skills using intuitive technical analyses to develop safe and innovative technologies for the future of aviation. Looking to begin full-time work in July 2023.

EDUCATION

Worcester Polytechnic Institute (WPI), Worcester, MA

BS Aeronautical Engineering, **GPA: 3.93/4.0** — **May 2023**

MS Aerospace Engineering, **GPA: 4.0/4.0** — **Jul 2023**

SKILLS AND COURSEWORK

- **Engineering Software:** Solidworks CAD, Flow, and FEA; ANSYS FEA; MATLAB; Simulink
- **Computer:** MS Office, MS Teams, Slack
- **General:** Team Organization, Team Leadership, Structural Analysis, Aerodynamic Design, Composite Materials, Systems Safety, ARP4761 and ARP4754A, Particular Risk Analysis, Incompressible Fluids
- **Courses:** Teamwork for Innovation, Aerodynamics, Aircraft Dynamics and Controls, Graduate Inc. Fluids

EXPERIENCE

Systems Safety and Certification Engineer Intern — **Jun 2022 - Present**

Alaka'i Technologies Corporation

- Researching and analyzing the effects of external risks through the Particular Risk Analysis
- Generating design and testing requirements through the safety assessment process in ARP4761
- Establishing guidance for aircraft risk zones to assist system development through ARP4754A
- Analyzing rotorcraft dynamics to assist in developing a flight simulation model through J2 Dynamics

Multi-Domain Vehicle Concept for Detecting Water Pollution — **Jan – May 2022**

WPI Interactive Qualifying Project, Berlin, Germany

- Executed fluid analyses on airfoils to determine actuation methods for a multi-environment wing
- Determined the vehicle mission plan intuitively using fluid dynamics knowledge
- Implemented a spar-based wing design and conducted structural simulations to determine airframe materials
- Scheduled team meetings and conducted organized discussions by implementing Roberts' rules

Undergraduate Research Assistant — **April – Sep 2021**

Aerospace Structures and Materials Laboratory, Worcester, MA

- Studied previous research methods to learn about mechanical vibrations and PBX properties
- Developed testing method and setup for structural monitoring of PBX composite materials under sinusoidal vibrations and simulated in ANSYS Mechanical

CFD and Propulsion Integration Subgroup — **Aug 2020 – Dec 2021**

WPI High Powered Rocketry Club, Worcester, MA

- Implemented Finite Element Analysis in ANSYS to determine viability of thrust plate design
- Determined drag coefficients for airbrake extensions accounting for atmospheric conditions in Solidworks Flow

Summer Testing Intern — **July – Sep 2021**

Yankee Engineering and Testing, Worcester, MA

- Monitored test procedures to ensure optimal test results for technical reports
- Implemented leveling to achieve more accurate measurements for failure
- Used incompressible flow theory to assist in fan selection for Water Penetration Testing

LEADERSHIP

Symphonic Association Executive Board – Social Media Chair
Phi Kappa Theta Executive Board – VP of Operations
WPI Aerospace Engineering Department – Peer Learning Assistant (PLA)

HONORS/AWARDS

Eagle Scout, Dean's List (4 semesters), NEWMAC Academic All-Conference, NEWMAC Track and Field Medal Winner, Sigma Gamma Tau Aerospace Honor Society