Owen McDade

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EDUCATION

University of Washington, Seattle
B.S Aeronautics and Astronautics Engineering
GPA: 3.7 (Dean's List)
Coursework: Mechanics of Materials, Thermodynamics, Statics, Dynamics/Kinematics, Electromagnetism, Waves

SKILLS

Design/Analysis: DFMA, GD&T**,** SolidWorks, ANSYS Fluent/Mechanical, Excel, Bamboo Studio, Notion, Python
Manufacturing/Testing: Composite Manufacturing (Autoclave, Hot Press, Oven, Plotter Table), Instron Physical Testing (Impact Tower), 3D Printing, Waterjet, Router

EXPERIENCE

University of Washington Formula Motorsport FSAE
Seattle, Washington
Front Wing Responsible Engineer June 2025 – Present

- Achieved 15% increase in front wing performance and 3% rest of car performance with a 3-element front wing.
- Delivered 20% decrease in manufacturing time and 40% increase in drive time through front wing design that simplified the manufacturing process utilizing DFMA and GD&T.
- Reduced mass by 12% and halved setup time and increasing serviceability of front wing mounting structure by using ANSYS Mechanical FEA modeling and physical testing.
- Qualified ANSYS Fluent CFD through wind tunnel testing and pressure rakes to ensure performance of aerodynamic package and accuracy of simulation methodology.
- Integrated front wing design and mounting with variety of sub teams to allow for reliable operation of the car with tailored experience for drivers, as a result Improving individual driver lap times by 3%.
- Trained 7 new members and ensured CAD and CFD simulations capabilities up to team standards, ensuring every member was ready and able to design and analyze up to team standards.

Impact Structure Responsible Engineer September 2024 - June 2025

- Reduced impact structure weight by 52% while maintaining critical energy absorption.
- Qualified design of 8 ply impact structure using impact tower and Instron tensile tester.
- Validated impact structure performance through full scale physical testing, utilizing accelerometer and load cells.
- Incorporated AIP + IA with multiple sub teams to guarantee cohesive design and implementation of the product.
- Ensured high quality standard of parts by following proper bagging and composite manufacturing procedures.
- Manufactured composite FSAE monocoque achieving structural stability and weight reduction through precise layup techniques and material choices.
- Used autoclave, hot press, and oven machines to manufacture high quality carbon fiber parts for the team. Leading to an overall mass drop of 1kg or 4% the mass of the car.

ADDITIONAL EXPERIENCE

Mount Si High School Soccer, *Team Captain* February 2024 – June 2024

- Lead team of 20 players to win the 2024 WIAA Soccer State championship by focusing on strong team cohesion.
- Created culture of dedication through leading by example on and off the field to grow the success of the team.

Aviation Climate Impact Analysis, *Environmental Impact Specialist* September – December 2024

- Evaluated local and global environmental impacts of aviation through careful research and data collection.
- Led development and presentation of concepts to decrease climate impact with the goal of making aviation carbon neutral.