

Joshua Emmel

Mechanical Engineering graduate

Contact

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Education

Washington State University

Bachelor of Science in
Mechanical Engineering
Graduated May 2024

Everett Community College

Associate of Science
Graduated June 2021

Licenses and Awards

Engineer In Training

Washington State,
January 2024

SolidWorks Mechanical Design Associate

February 2021

Key Skills

- SolidWorks CAD
- Additive Manufacturing
- Composites Manufacturing
- Team Leadership
- Material Science and Materials testing
- Project Timeline management
- Arduino/C++
- Matlab
- EES
- Microsoft software suite
- Adobe software suite
- Hand/Power tools
- Technical Theatre and Set Construction

Professional Summary

Engineering graduate with a focus on renewable and sustainable energy. Primarily focusing on offshore energy generation methods including wind, wave, and tidal. Expertise in additive manufacturing processes and materials, and composites manufacturing.

Experience

Werner Paddles - Monroe, WA

Laminator, June 2022 - August 2023

Fast-paced manufacturing environment producing premium paddle blades for kayaks, canoes, and stand-up paddle boards.

- Complex fiberglass layup in four concurrent compression molds.
- Quality assurance of blades produced maintaining 90%+ acceptance.
- Material handling and organization of over 30 different fiberglass pieces of varying weaves, weights, and sizes.
- Time management and workflow optimization resulting in exceeding shift quota by up to 20%.

Extracurricular

Wind Energy Club, Washington State University

Multidisciplinary collegiate wind energy competition hosted by the Department of Energy with the National Renewable Energy Laboratory.

- Design, manufacture, and test a 45cm diameter offshore wind turbine.
- Research and plan a utility-scale offshore wind farm.
- Participate in community outreach sharing information about wind energy through events such as Girls Explore Stem and KidWind.

Projects

Protective Composite Floorboards, The Boeing Company and WSU, 2024

Develop and prove a manufacturing plan for composite sandwich panels while maintaining strict project requirements, active communication with mentors regarding progress, and working in a team dynamic.

Environmental Degradation of 3D Printed Polymers, Self, 2024

Tensile test on seven common FDM polymers exposed to different environments. Exposure of materials will complete in December of 2024.

Optimizing Wind Turbine Performance, WSU, 2024

Created and executed a test plan for determining the mechanical torque of a wind turbine rotor in a wind tunnel using kitchen tongs and custom blades.

Arduino Based Coin Sorting System, WSU, 2023

Design, program, and test a system to sort red and blue coins using a state machine with a self-built color sensor and a PID controlled DC motor.

Cougar Spirit Multitool, WSU, 2023

Small 4-in-1 tool which uses the WSU logo as a multitool with a Philips, flathead, adjustable wrench, and a bottle opener.

Anchor Chain Transversal Device, WSU, 2022

Design and Manufacturing of a robust device used to traverse a chain in a marine environment.

