

Santiago Barquin Montero

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Education

University of Wisconsin - Madison

B.S. - Mechanical Engineering

May 2024

- GPA: 3.52/4.00
- Certificate in Engineering Thermal Energy Systems
- Dean's Honor Roll - Spring 2020, Fall 2020, Spring 2021, Fall 2022, Fall 2023, Spring 2024
- Relevant coursework - Statics, Dynamics, Thermodynamics, Fluid Dynamics, Heat Transfer, Internal Combustion Engines, Material Science, Economics, Communications, App. Thermal/Structural FE Analysis

Engineering Projects

Stirling Engine Project – Redesign and Prototype Fabrication

Spring 2024

- Completed a semester-long project focused on manufacturing and redesigning a thermo-mechanical device
- Cultivated understanding of design principles, dimensioning and tolerancing, manufacturing processes, and quantitative analysis to optimize the Stirling Engine

Finite Element Analysis – Applied Thermal and Structural FE Analysis

Spring 2023

- Enhanced skills in modeling and analyzing complex systems, including the static and transient response for structural analysis, fluid dynamic, and heat transfer simulations
- Applied Ansys software, both GUI and APDL, to solve real world engineering problems, enhancing problem solving and critical thinking abilities in the field of engineering

Bungee Tensile Strength Project - Mechanics of Material Lab

Spring 2021

- Experimented with various bungee cords to evaluate their tensile strength, properties, and limits while testing the capabilities of the equipment at our disposal

Wind Turbine Project - Intro to Mechanical Engineering

Spring 2020

- Collaborated with a team of engineers to create a wind turbine prototype that combined cost, efficiency, and design elements to provide optimal functionality

Work Experience

CRB Group – Mechanical Engineer Intern

May 2023-Nov 2023

- Generated \$20,800 through billable work over the internship duration
- Developed AutoCAD, MicroStation, and Revit construction drawings and specifications tailored to clients' needs while in compliance with regulatory bodies and industry standards
- Coordinated with other disciplines as well as vendors, clients, and contractors

GE Healthcare – ARC Mechanical Engineer Co-op

January 2022-August 2022

- Utilized 3D modeling, CAD tools, and technical documentation skills to verify, test, and document new products as well as support design changes throughout the product life cycle
- Interacted with cross-functional teams to understand design and business constraints
- Managed various projects and communicated effectively to drive business outcomes

Remodeling Assistant – Hourly Contractor

June 2021-August 2021

- Operated various machines and tools to precisely cut, tailor, and build based on the project specifications
- Collaborated with an engineer to design and plan the execution of several home improvement projects
- Provided input and helped redesign workstation areas for maximum space effectiveness

Target - Team Member

December 2018-September 2019

- Communicated with fellow team members and coordinated division of daily tasks to maintain a welcoming store environment
- Trained two fellow team members to meet Target responsibilities and standard operating procedures

Technical Skills

- English and Spanish fully proficient - reading, writing, and speaking
- Certified in Basic Programming (MATLAB)
- Proficient in Microsoft Word and Excel programming
- Proficient in Computer-Aided Design Software (CAD) - SolidWorks, Creo, AutoCAD, Ansys, Revit, MicroStation, Bluebeam