Paul Wilhelm

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Senior pursuing BS in mechanical engineering seeking December 2024 full time position.

Education

Iowa State University *Ames, IA* Anticipated Graduation: Fall 2024
Bachelor of Science in Mechanical Engineering Core: 3.79

Experience

Automotive Design Engineer Intern *Waukesha, WI*
Husco International May 2024 – Aug. 2024

- Designed tooling for the most accelerated project timeline in Husco Automotive history
- Completed tests and test reports to validate parts, enabling a cost savings supplier change
- Reworked an accelerated durability test stand for closed loop control

Automotive Design Engineer Co-op *Waukesha, WI*
Husco International Jan. 2023 – Aug. 2023

- Built and analyzed over 800 prototype solenoids, including masters
- Identified and addressed assembly line bottleneck expected to result in $20k profit annually
- Preformed testing and root cause issue analysis using statistical tools (Quantum XL &Minitab) to solve design problems, expected to save the company over $500k annually
- Simulated electromagnetic and mechanical properties of parts and tooling to iterate designs

SolidWorks Designer *Remote*
Fiverr - Freelance Feb. 2023 – Feb. 2024

- Interpreted customer requirements to design over 30 parts and assemblies
- Ran movement studies and static simulations to verify design performance
- Designed efficiently and accurately to achieve near perfect (97%) customer satisfaction

Projects

Cyclone Student Launch, Payload Team Lead Aug. 2023 – Present

- Managed a team of five working to design, manufacture, and revise a scale lander vehicle
- Preformed trade studies, made critical design decisions to optimize for design constraints
- Planned and executed a detailed testing campaign to maximize lander reliability

Cyclone Student Launch, Member Aug. 2021 – May 2023

- Used SolidWorks to create three detailed system assemblies and dozens of part drawings
- Engineered an autonomous inertial navigation system, a radio-control robotic camera, and a data acquisition and reporting system
- Reconfigured INS hardware for a cost savings of over 50%
- Wrote four robust C++ programs for embedded systems which all preformed in application
- Contributed to over 1500 pages of reports and 9 design review presentations to NASA

prISUm Solar Car Team, Member Aug. 2020 – May 2022

- Collaborated with composite materials director to fabricate composite parts
- Contributed to system level design and designed individual parts to meet specifications
- Installed and maintained components such as the brake system, electric motors, and structural components

Honors and Certifications

- SolidWorks Drawing Tools Professional (C-BUKL5M2RGD) 2024
- NASA Student Launch Altitude Award 2024
- Relativity Space 3D Printing Award 2023
- Certified SolidWorks Professional (C-NTX49268FZ) 2022
- Eagle Scout 2019
- SCUBA – PADI Open Water Diver 2018

Skills

- CAD (most software), FEA, Ansys Electromagnetic, C++, Python, MATLAB, Technical Communication, GD&T, Leadership, Statistical Analysis, 3DP, Machining, Welding