AIDEN RENSHAW

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EDUCATION

Iowa State University **Ames, IA**
Bachelor of Science in Mechanical Engineering | Expected May 2028

PROFESSIONAL & ENGINEERING EXPERIENCE

Caterpillar Inc. **Peoria, IL | May 2026 – Aug 2026**
Student Test & Validation Technician Intern

- Reconfigured a dSPACE SCALEXIO MRET simulator system by separating and vertically stacking components within an existing test cabinet.
- Developed end-to-end teardown and modular integration plans, safely managing subassemblies under tight spatial constraints.
- Authored photo-documented Standard Operating Procedures (SOPs) to establish an official, repeatable process for future CAT teams.
- Built and configured advanced test benches, electrical harnesses, load plates, and splice plates for medium wheel loaders and motor graders.
- Executed electrical system routing and troubleshooting, ensuring accurate wiring connectivity and functionality for heavy machinery test environments.
- Collaborated daily with validation engineers to prepare heavy machinery subsystems for rigorous performance and safety testing.

Formula SAE, Iowa State University Chapter **Ames, IA | Jan 2026 - Present**

- Modeled and manufactured custom powertrain mounts using SolidWorks and 3D printing technology, enabling modular off-car system testing and improving cart mobility.
- Assisted in the design and fabrication of a dead-man braking system for a battery transport cart to ensure strict safety mechanisms during battery handling.

Wind Turbine Design & Manufacturing Project **Ames, IA | Aug 2025 - Dec 2025**

- Conducted research and developed design concepts for a small-scale wind turbine.
- Created 3D models and manufactured components using refined design methods.
- Tested performance, identified design issues, and implemented improvements to optimize functionality.

TECHNICAL SKILLS

CAD & Simulation: SolidWorks (assemblies, schematics), PTC Creo
Programming & Analytics: Python (data structures, automation), Microsoft Excel
Engineering & Testing: Root cause analysis, validation environments, electrical wiring, troubleshooting

LEADERSHIP & ACTIVITIES

Iowa State University Men's Club Soccer **Ames, IA | Aug 2025 - Present**

- Balance a rigorous mechanical engineering curriculum with a competitive collegiate athletic schedule involving multiple weekly practices and regional travel.
- Collaborate effectively with teammates to execute strategic game plans, fostering quick communication and strong team cohesion.