CONNOR STONE

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Education

Purdue University, West Lafayette, IN — May 2027
Bachelor of Science in Mechanical Engineering — GPA: 3.75
Minor: Electrical and Computer Engineering — Dean's list (23-25)

Skills: NX | Fusion 360 | SolidWorks | Inventor | GD&T | Project Management | FEA (Ansys) | DFMA | Python | C | MATLAB | Microsoft Excel | FDM 3D-Printing | Manual Machining (Mill + Lathe) |

Experience

Formula SAE, *Chassis Team Member* — *August 2024 – Present*

- Performed FEA on the bulkhead and anti-intrusion plate and iterated the design to achieve an ultimate safety factor of 1.4 under loading conditions up to 50 kN
- Engineered a modular part in a Formula SAE wooden car model that allowed rapid adjustment of pedal box placement, improving ergonomics and fit across multiple driver profiles
- Analyzed pedal box rail design using statics and stress calculations to validate material suitability

ASME Energy — *August 2024 - Present*

<u>Rain Energy</u>

- Researched and rapid prototyped water turbine designs, evaluated blade geometry, flow performance, and material considerations, as well as presented findings for sustainable power production
- Set a 0.4 mm worst-case tolerance target for a 3D printed PLA turbine mount and achieved repeatable, key alignment by applying tolerance stack-up analysis and compensating for printer variability

<u>EV Grand Prix</u>

- Engineered a 22S10P battery module using Molicel P50B 21700 cells, with varying conductive materials, balancing conductivity, manufacturability, and safety
- Redesigned electric vehicle kart battery connection plate, reducing volume by 17% while maintaining current capacity, structural integrity, and packaging efficiency

Mechanical Engineering Tutor — *January 2025 – May 2025*

- Tutored mechanical engineering students in thermodynamics

EPICS Project, *Project Archivist* — *August 2023 – May 2024*

- Designed and prototyped a bicycle powered generator syst an illuminated display to reduced part count by 50% through DFA redesign, simplifying assembly and minimizing potential failure points
- Engineered a detachable friction drive generator mount with shaft deflection limited to 0.05 mm under a 30 N radial load to maintain alignment and minimize vibration during operation
- Oversaw documentation strategy across a multi-disciplinary team, guiding contributors to capture design rationales, tradeoffs, and testing outcomes for downstream continuity

MATE ROV*, Lead Mechanical Engineer* — *August 2019 – May 2023*

- Constructed a streamlined ROV; integrated six degrees of freedom thruster configuration delivering 30 N in surge, 45 N in yaw, and 22 N in heave/pitch for enhanced maneuverability and control
- Designed a vertical profiling float with a syringe actuated volume control system, enabling up to 1.96 N change in buoyant force to achieve controlled ascent and descent through water

Personal Projects

Engineering Design Project — *June 2025 - August 2025*

- Created and analyzed a Chinook style RC helicopter tray system applying calculations, and tolerance stack-ups to optimize connections and structural integrity under battery and PCB loads
- Validated structural design through CAD modeling and FEA, optimizing simplified geometry to reduce wasted material and improved tray deflection by over 99% compared to initial estimates

Word Search — *September 2023 – December 2023*

- Developed Python-based word search solver
- Utilized modularization through functions, user input validation, nested looping, and error handling

Interests: Private Visual Flight Rating License Training, Climbing, Hiking, Running, Guitar & Piano