Aidan Crouso

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Education

The Ohio State University – GPA: 3.44 / 4.00 — Expected May 2026
B.S. Mechanical Engineering, Design Thinking Minor
Full Academic Merit Scholarship

Columbus State Community College – A.S. in Science — May 2024

Experience

Mechanical Design Engineering Intern — May 2025 – Aug 2025
Honda - *Raymond, OH*

- Designed stamped steel bracket with mass production intent to accurately position and secure wire harness and air conditioning pipe to engine side mount.
- Optimized design considering the balance of cost, weight, manufacturability, assembly, and durability.
- Modeled in CATIA V5, performing tolerance stack up analysis, CAE validation, and cost estimation.
- Managed project schedule and documented design confirmation activity through structured design reviews.
- Collaborated with cross-functional teams to implement a **$0.21 per-unit cost reduction**, saving ≈ **$50,000 annually** on a high-volume production component.
- Performed full teardown and rebuild of a V6 engine during training to understand system-level engine function.

Mechanical Engineering Intern — May 2024 – Aug 2024
Honda - *East Liberty, OH*

- Designed components for stamping presses, **doubling roller system durability** and improving serviceability.
- Created 2D drawings, sourced supplier quotes, and verified part fit and function during installation.
- Programmed indoor crane boundary modifications using AutoCAD and proprietary software to improve safety.
- Analyzed mechanical and hydraulic systems to identify failure causes and recommend design changes.

Projects & Extracurriculars

UV Food Storage Container Senior Design Project — Aug 2025 – Present
Client Communications Leader

- Leads communication with industry partners, presenting design updates and documenting patentable features.
- Develops conceptual prototypes emphasizing system integration, user requirements, and design validation.

Honda Civic Sport Brake Dynamometer — Jan 2025 – Apr 2025
Project Lead

- Led 8-person team in designing an inertia brake dynamometer to test durability of 2022 Honda Civic brake pads.
- Coded a MATLAB script to iterate through 14,000 gear pairs and selected the best gear train based on tooth count, module, face width, material and pressure angle.
- Modeled key components in SolidWorks and compiled a 70-page technical report documenting design, analysis, testing, and maintenance procedures.

Formula Buckeye FSAE Team — Aug 2023 – Dec 2024
Chassis and Powertrain Sub Team Member

- Contributed to **1st-place finish at FSAE Michigan** among 120+ teams.
- Designed and fabricated molds for carbon–fiber monocoque chassis.
- Assisted with layups for aerodynamic components and aided in fabricating mobile engine dynamometer cart.

Skills

CAD & Design: CATIA V5 (Solids & Surfacing), SolidWorks, Inventor, AutoCAD, Fusion 360, Tolerance Analysis, GD&T.
Engineering Tools: CAE, MATLAB, Arduino IDE, Ansys, DFM/DFA, Failure Analysis, Design Validation.

Relevant Coursework

Applied FEM (Ansys), SolidWorks CAD/CAM, Machine Elements I & II, Product Design Engineering