

Alex Goettsch

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EDUCATION

Purdue University
Bachelor of Science in Mechanical Engineering
Cumulative GPA: 3.26/4.00

West Lafayette, IN
August 2024 – May 2028

Cincinnati Hills Christian Academy
High School Diploma
Weighted GPA: 4.27/4.00

Cincinnati, OH
August 2020 – May 2024

PROJECTS

Purdue American Society of Mechanical Engineers (ASME)

Biomechanics - Pressure Mapping Insole

West Lafayette, IN
August 2025 – Present

- Designing and prototyping a foot pressure mapping device, utilizing Fusion360 CAD software, on-campus 3D-printing resources, breadboarding, and Arduino IDE software.
- Conducting mechanical testing and data collection on device FSRs to ensure durability and sensor accuracy.
- Applying design principles that will enable live biomechanical feedback and help reduce injuries for athletes, runners, and others affected by improper foot placement.

Northwestern Ave. Safety Design Project

ENGR 131 Purdue Coursework

West Lafayette, IN
October 2024 – December 2024

- Conducted field experiments and data analysis to determine the most effective method for increasing pedestrian and cyclist safety along Northwestern Avenue in West Lafayette, Indiana.
- Designed, fabricated, and tested a custom sign that reduced potential collisions by 71%. Optimized the design to meet the specific criteria and constraints of the project while ensuring accessibility and minimal disruption to pedestrians and cyclists.
- Presented findings to a class of 150+ students, earning the “People’s Choice Award” as voted upon by my peers.

WORK EXPERIENCE

Kings Island

Certified Trainer

Mason, OH
March 2022 – August 2025

- Responsible for overseeing and ensuring the safety of our rides and strengthening safety compliance, including performing daily operational checks, and handling guest service by resolving concerns to maintain a positive guest experience.
- Trained and mentored 40+ associates each season, improving team performance, the guest experience, and team morale.
- Collaborated with maintenance technicians and ride operators to identify operational issues and resolve guest-facing concerns.

Leaning Eagle Coffee Bar

Barista and Bell Manager - CHCA E&S Certificate Internship

Cincinnati, OH
August 2021 – May 2023

- Prepared beverages, managed inventory, and trained new staff to deliver exceptional customer service.
- Maintained fast-paced operations and upheld quality standards during peak times.

SKILLS

Technical Skills: Siemens NX (CAD), Teamcenter (PDM), Fusion 360 (CAD), Solidworks (CAD), Engineering Documentation (ECO), MS Office (Excel modeling), MATLAB (data analysis and modeling), Python (programming)

Interpersonal Skills: Leadership, Teamwork, Morale, Guest Service, Communication, Employee Training, Problem Solving

RELEVANT COURSEWORK

Highlighted Coursework:

- **MFET 163 - Graphical Communication & Spatial Analysis:** Utilized Siemens NX, applying design intent through dimensioning schemes, parameters, and design tables; worked within a PDM (Siemens Teamcenter) and processed Engineering Change Orders (ECOs).
- **ENGR 131/132 - Transforming Ideas to Innovation 1 & II:** Developed and justified mathematical models in Excel and MATLAB to support evidence-based decision making; applied systematic design processes to develop innovative solutions.
- **ME 264 - Introduction to Manufacturing for Mechanical Design (In Progress):** Exposure to machining processes, CNC programming, metrology; application of GD&T, tolerances, and material selection principles to evaluate manufacturable mechanical components.

Thermodynamics I (ME 200) • Basic Mechanics I & II (ME 270/274) • Electrical Engineering Fundamentals I (ECE 20001)