

# KRISTA ROESSLE

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## EDUCATION

**Cornell University**, College of Engineering, *Ithaca, NY*  
Bachelor of Science, Mechanical Engineering  
Cumulative GPA: 3.217

**Expected May 2025**

**Relevant Courses:** Fluid Mechanics, Dynamics, Heat Transfer, Mechatronics, Mechanical Properties of Materials, Differential Equations for Engineers, Thermodynamics, Linear Algebra, System Dynamics, Advanced Product Design

## PROFESSIONAL EXPERIENCE

**Stryker**, Total Joint Powertools Design Engineering Intern, *Kalamazoo, MI* **May 2024 – Aug. 2024**

- Utilized Creo PTC to design two EMC test fixtures, incorporating complex nests and a compressed airline system
- Conducted a noise investigation and jury study on a System 9 handpiece; designed 6 noise reduction strategies
- Designed and assembled transparent prototypes of four handpieces using specialized post-processing techniques
- Created a company-wide material database used to inform material decisions for design and manufacturing

**Amway**, Manufacturing Engineering Intern, *Ada, MI*

**May 2023 – Aug. 2023**

- Utilized Lean Six Sigma principles to improve bulk solid transfer time on the All-Plant Protein Powder Line
- Mitigated frequent production line interruptions to eliminate 91.5 hours of unplanned downtime, saved \$25.2k
- Coordinated experimentation trials with line technicians and engineers, and led discussions with external vendors
- Created a report on root-cause analysis for potential plant failures in 5 regions; proposed 3 cost-saving measures

## CAMPUS INVOLVEMENT

**Cornell Concrete Canoe**, Mold Subteam Lead, *Ithaca, NY*

**Oct. 2021 – Present**

- Managed an 18-member team to work cross-functionally to design and manufacture a 19.5-foot concrete canoe
- Spearheaded major project change from male mold to female mold for the first time in team history
- Designed and fabricated toleranced shims to improve release issues with mold using Autodesk Fusion 360
- Managed multiple innovative projects at once, working within strict deadlines and budget restrictions
- Achieved overall 2nd place finish at the 2023 ASCE Regional Concrete Canoe Competition

**Cornell University**, Mechanical Synthesis Teaching Assistant, *Ithaca, NY*

**Jan. 2024 – May 2024**

- Selected for the highly competitive role as 1 out of 2 juniors, to be part of a team of 8 other seniors
- Led laboratory sections of 30 students, created lesson plans, and collaborated with faculty on a weekly basis
- Graded assignment and exams, offering constructive feedback to facilitate student learning
- Hosted regular office hours for personalized assistance, leveraging strong interpersonal skills to assist students

**Water Pump Project**, Team Leader, *Cornell University, Ithaca, NY*

**Mar. 2023 – May 2023**

- Led a team of 5 in designing and fabricating a 4-cylinder boxer piston pump
- Utilized Autodesk Fusion 360 for pump design and employed lathe and mill for part fabrication
- Achieved 2nd in competition with a pumping capacity of 5.7 L of water per minute

## ADDITIONAL EXPERIENCE

**The Horse's Head, Etsy Shop**, Co-Owner, *Temperance, MI*

**Dec. 2020 – Present**

- Founded a father-daughter business specializing in the refurbishment of vintage lighters
- Created an Excel sheet to track over \$10k in revenue, received over 200 5-star reviews
- Procured and restored lighters, and communicated with customers, highlighting exceptional customer service

## SPECIALIZED SKILLS

**Programming Languages:** MATLAB (Object-Oriented Programming)

**Other Software:** Creo PTC, Solidworks, Autodesk Fusion 360, Tableau, Adobe Photoshop, Microsoft Excel, PowerPoint

**Activities:** Cornell Concrete Canoe, Cornell Club Rowing, Society of Women Engineers (SWE), ASME

**Hobbies:** Motorcycles, Knitting, Sewing, Canoeing, Piano, Weightlifting, Running

**CAD Portfolio:** <https://cornell.digication.com/mae-2250-krista-roessle/cad-projects>