

Christine Guo

Leechburg, PA 15656

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY

Expected May 2027

Bachelor of Science, Mechanical Engineering, Minor in Creative Writing

GPA: 3.85

Relevant Courses: Mechanical Design, Statics & Mechanics of Solids, Thermodynamics, Differential Equations, System Dynamics, Mechanics of Materials, Intro to Fluid Mechanics, Intro to Aeronautics

PROFESSIONAL EXPERIENCE

PPG Industries, Monroeville, PA, *Automation Engineering Intern*

May-Aug 2025

- Researched and identified processes within chemical labs best fit for possible automation
- Developed Python scripts to automate data processing from lab equipment, reducing manual data entry time and minimizing human error
- Designed and programmed a cobot arm trajectory in JupyterLab to simulate automated vial handling for a high-throughput chemical testing process
- Authored a proof-of-concept report detailing technical requirements, ROI analysis, and a proposed implementation timeline and presented findings to a board of 10+ managers

ENGINEERING PROJECTS

Mechanically Driven Water Bottle Brush, Mechanical Design Project

Spring 2024

- Modeled and designed a gear train assembly in Fusion 360 to translate rotation from a top handle into high-speed rotation of an internal brush, optimizing a 1:5 gear ratio for effective cleaning speed
- Prototyped and validated the design by fabricating components via 3D printing and machining, assembled and tested the system, and confirmed successful cleaning of the interior of standard water bottles

Torque Wrench Design & Analysis, Mechanical Design Project

Spring 2025

- Wrote MATLAB script to iterate process of finding dimensions and material properties that best fit the given constraints
- Modeled torque wrench in Fusion & analyzed its resulting deformations, stresses, and strains using FEM analysis with Ansys

LEADERSHIP EXPERIENCE

Peer Advisor, Cornell University

Aug 2024-Present

- Lead workshops involving ethics, networking, and time management skills to a class of 20+ students

Bethe Active Citizen, Cornell University

Aug 2024-Present

- Plan, organize, and develop new ideas and events to improve residents' quality of life

ACTIVITIES

Society of Women Engineers, Cornell University, *Member*

Aug 2024-Present

American Society of Mechanical Engineers CU Chapter, Cornell University, *Member*

Aug 2024-Present

AWARDS

Trib Total Media Outstanding Young Citizenship Award, Leechburg, PA

2022 & 2023

- Awarded for displays of exemplary character, leadership, and dedication to 120+ hours of community service

Valedictorian, Leechburg Area High School, Leechburg, PA

May 2023

- Achieved the highest academic achievements in the graduating class with a GPA of 4.72

SPECIALIZED SKILLS

Programs: Fusion 360, MATLAB, Python, JupyterLab, Microsoft Office Suite

Languages: English (fluent), Chinese (conversational)