Eric Chen

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EDUCATION

Swarthmore College, Swarthmore, PA   *May 2026*
B.S. in Engineering, Minors in Computer Science, Applied Mathematics – McCabe Scholar – Engineering GPA: 3.42/4.00

WORK EXPERIENCE

Mechanical Engineering Intern, GEOKON, Inc., Lebanon, NH   *May – August 2025*
- Improved tilt sensor durability by 64% through iterative redesigns of component features and validated through multiple rounds of testing on a universal testing machine
- Increased tilt sensor stability by 59% by conducting a Design of Experiments (DOE) to compare component variants, leading to fewer sensor derailments and a significant reduction in skewed data
- Optimized pressure sensor heat treatment settings for long-term reliability by developing a custom high-temperature testing setup and analyzing data using Python and SQL
- Improved cable crimping cycle time and consistency by designing and 3D printing an adjustable marking fixture
- Conducted inspections of returned product PCBs and analyzed client data for a Root Cause Investigation (RCA) on corrosion, and researched potential prevention and protection solutions

Manufacturing Process Engineering Intern, Hypertherm Associates, Hanover, NH   *May – August 2024*
- Built a fully functional automated assembly management system for plasma cutter nozzles, validated through multiple rounds of on-site testing following Lean Six Sigma principles
- Improved cycle time, scheduling, and traceability, and reduced risk for plasma cutter nozzle automated assembly by implementing digitized Kanban, BOMs, batch sizes, and QA tests dynamically configured for 5+ products
- Enabled cross-compatibility between contemporary and legacy systems and extended product lifespans by redesigning plasma cutter parts while optimizing for manufacturability and assembly

Makerspace Technician, Swarthmore College Makerspace, Swarthmore, PA   *September 2022 – Present*
- Operated, demonstrated, and maintained 3D printers, laser engravers, vinyl cutters, and woodshop equipment
- Advised students on project planning and tool choice to achieve their goals safely, efficiently, and economically
- Designed and fabricated project label boxes with Fusion 360, Adobe Illustrator, and laser engravers to improve storeroom organization, and reorganized Makerspace layout for better tool accessibility

PROJECTS

Crum Regatta Kayaks
- Led a team of 4 students to design and build functional kayaks out of commonly available materials in under 1 week to compete in Swarthmore College's Annual Crum Regatta (won in 2023 and 2025)

Projector Basket
- Designed and fabricated a custom plywood basket using tab and slot construction to house a classroom projector and allow for increased adjustability over a wider range of projection angles

LEADERSHIP

Treasurer, Swarthmore Hydrogen Fuel Cell Vehicle Team, Swarthmore, PA   *September 2025 – Present*
Vice President and Treasurer, Swarthmore College Archery Club, Swarthmore, PA   *September 2024 – Present*
Eagle Scout, Boy Scouts of America Troop 45, Hanover, NH   *November 2021*

SKILLS

Design: SolidWorks, Fusion 360, OnShape, Technical Drawings, GD&T, DFMA, FDM and SLA 3D Printing, LTspice
Programming: Python, SQL, MATLAB, Simulink, C, C++, Arduino, RegEx, LoggerNet
Manufacturing: Lean Six Sigma, Value Stream Mapping, NoMuda MES Visual Factory

CERTIFICATIONS

Certified SolidWorks Professional (CSWP)   *August 2025*