

# Richard Chen

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## EDUCATION

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**Worcester Polytechnic Institute** | Worcester, MA  
*Bachelor of Science in Mechanical Engineering*

May 2026  
GPA: 4.00

## RELEVANT COURSEWORK | \*Current Coursework

**Courses:** Intro to Mfg. Eng, Intro to Statics, Stress Analysis, Intro to Dynamics, Fluid Mechanics, Materials Science, Materials Processing\*, Physical Metallurgy\*, Computer-Aided Manufacturing\*, Achieving Effective Operations\*

## SKILLS

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**Technical:** CAD/CAM/Analysis, Haas CNC Milling/Turning, FDM 3D Printing, Metallography, Mechanical Testing  
**Software:** SOLIDWORKS, Fusion 360, ANSYS Workbench, MountainsMap, MATLAB, Python  
**Certifications:** IISE Lean Six Sigma Green Belt (12/27/23), OSHA 10-hour General Industry Card (06/30/24)

## PROJECTS

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**Mass Finishing Study** | Worcester, MA April 2024 – Present

- Investigating correlations between edge curvature and process variables in mass finishing of aluminum parts.
- Operated CNC mill and Bel Air Mass Finisher to make and treat aluminum 6061 T6511 sample parts.

**Stone Tool Analysis** | Worcester, MA September 2023 – January 2024

- Conducted surface roughness measurements of tool samples using Gelsight handheld mobile device.
- Performed multiscale surface analysis of raw areal measurements using MountainsMap and MS Excel.
- Co-authored paper, "Multiscale characterizations of topographic measurements on lithic materials and microwear", published in *Journal of Archaeological Science: Reports*, Volume 57 for September 2024.

**V6 Engine CAD** | Worcester, MA September 2023 – October 2023

- Created CAD model of V6 engine using Solidworks as well as animation of engine operation.
- Drafted ASME Y14.5 compliant drawings for each individual part, featuring various non-standard views.

## EXPERIENCE

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**Center for Heat Treating Excellence** | *Undergraduate Assistant* March 2024 - Present

- Conducted experiments on viability of using fluidized bed furnaces to form bainite in steel through austempering.
- Developed CCT diagrams for 52100 bearing steel by recording cooling curves on a quenching dilatometer.
- Assisted graduate students with literature reviews, experimental procedures, and other research tasks.

**WPI Washburn Machine Shop** | *Machine Shop Technician* January 2024 – September 2024

- Responsible for providing project assistance and training to lab users on CNC machine tools and other equipment.
- Performed regular maintenance on machine tools, cleanup of shop incidents, and organization of tool cabinets.
- Enforced safety protocols during shop hours with WPI staff and senior PLAs.

**WPI Surface Metrology Lab** | *Lab Assistant* September 2023 – Present

- Organized experiments and managed logistics as project lead for Archaeology and Mass Finishing studies.
- Fabricated test samples and experiment fixtures using CNC machining and 3D printing.
- Recorded and distributed minutes from weekly lab meetings with PI.

## ACTIVITIES

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**Affiliations:** ASME, SME, Materials Advantage

**Clubs:** High Power Rocketry Club (HPRC), Science Fiction Society (SFS)