

Alexander “Alexi” Peppas

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EDUCATION

University of Pennsylvania | Philadelphia, PA

Masters of Science in Mechanical Engineering and Applied Mechanics | May 2028

Carnegie Mellon University | Pittsburgh, PA

Bachelor of Science in Mechanical Engineering | May 2026

WORK EXPERIENCE

Human Engineering Research Laboratories (HERL) | Univ. Pittsburgh | Research Assistant | Summer 2023 & 2026

- NSF REU Program by Dr. Rory Cooper: Contributed to and conducted research on assistive technologies
- Researched and designed a racing wheelchair made out of folded aluminum stock for lower cost, ease of material transportation, ease of manufacturing, and ease of customization for athletic performance
- Fabricated folded aluminum stock ultralight wheelchairs and tested for impact strength and fatigue

Shift Robotics | Austin, TX | Mechanical Engineering Intern | Summer 2025

- Led the refurbishment and repair efforts of over 50 pairs of Moonwalkers
- Assisted with the prototyping and development of the next generation of Moonwalkers

Apple Inc. | Cupertino, CA | iPad Global Supply Chain Management Intern | Summer & Fall of 2024

- Performed financial, logistical, and manufacturing design analysis for small parts on multiple iPad programs
- Traveled to China for in-person negotiations and manufacturing upkeep with stamping and CNC vendors

PROJECTS

Carnegie Mellon University: Consumer-Focused Injection Molder Project | Spring 2026

- Designed and built a consumer-focused injection molder machine for repurposing recyclable plastics into new products in an effort to reduce single-use plastic waste [Team of 5]

Carnegie Mellon University: Powered Kitchen Tongs Project | Fall 2025

- Designed and constructed a prototype of a set of motor-powered kitchen tongs for rotating and grabbing [Team of 6]
- Designed for a specific demographic of elderly cooks, allowing for easy usage with arthritic and tendinitis symptoms

Carnegie Mellon University: Lightweight Collapsible Camping Chair Project | Spring 2024

- Designed and built a collapsible camping chair made from shock cord, PVC, 3D-printed PLA, and sewn nylon [Team of 3]

Carnegie Mellon University: FEA Load-Bearing Crank Project | Spring 2024

- Designed and built an acrylic mass-minimized crank using Force Element Analysis made to fail at a specific load applied in torque and bending with limited support [Team of 3]

LEADERSHIP

Carnegie Mellon Racing: Shop Manager | Spring 2023 - Summer 2024

- Organized and maintained industrial workshops for manufacturing and assembly of formula SAE electric car

Bridge Point Elementary School: Annual STEAM Day Instructor | 2016 - 2021

- Developed and taught lesson plan for class on catapults for elementary school STEAM Day annual event
- Designed a ballista catapult for specific launch conditions, location, and payload

SKILLS

Engineering Analysis: FEA Analysis, MATLAB, SOLIDWORKS, Fusion, Python

Practical: CNC & Manual Machining, Welding, 3D Printing, Laser Cutting, Soldering, PCB Design

ACTIVITIES & HONORS

Carnegie Mellon University:

- University Honors
- Senior Leadership Recognition

Boy Scouts of America:

- Eagle Scout Rank, Earned August 2018

Currently Listening to: David Bowie, Santana, and Earth Wind & Fire