# Eleanor Palmer

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## EDUCATION

**Washington University, McKelvey School of Engineering,** St. Louis, MO **Expected** May 2028
Bachelor of Science in *Mechanical Engineering,* Minor in *Computer Science*

## WORK EXPERIENCE

**Motim Industries X Mass General Hospital**
*Mechanical Engineer & Product Developer*, Newport, RI May 2026 – August 2026

- Led the life-cycle development of three manufacturing tools for computed tomography machine components, including a ceramic wet saw, otoscope fiducial aligner, and fiber optic wire cutter, from initial design through fabrication and implementation; utilized SolidWorks and 3D printing to complete work
- Developed a custom web-based calibration interface for fiber optic wire cutter using C++ and HTML, hosted on the Arduino R4 Wifi, enabling precise cutter calibration and identification of custom cuts
- Wrote comprehensive documentation for each design, including initial design requirements, analysis and photographic records of each prototype iteration, detailed engineering drawings of final designs with clear specifications, assembly procedures and user manuals to support fabrication, maintenance, and future modifications

**Refleece,** *Manufacturing Assistant*, Fall River, MA May 2025 – August 2025

- Conceived and led production of an original duffle bag product with material from upcycled jackets, generated concept designs, created patterns and die cut samples to optimize material use, authored outlines for sewing manufactures
- Shaped the launch of a used gear-resale marketplace, informed key feature and functionality decisions and produced product photography to populate the platform at launch
- Organized and facilitated a clothing drive, managing a 10-person team through sorting and quality checking process to identify donatable items to a local charity

**Audible,** *Software Engineering Co-Op*, Cambridge, MA August 2023 – June 2024

- Collaborated on a team developing an AI-powered pipeline to convert eBooks into audiobooks using synthetic voices, contributing to the design and implementation of automated content processing workflows
- Developed an image-processing workflow using AWS Lambda and S3 to mark and track image locations within eBooks, enabling the text-to-speech pipeline to properly handle visual content
- Built and automated alerting system that collected location and type data from issues in the text-speech pipeline and sent daily email notifications to the development team, improving visibility into pipeline failures and processing errors

**Northeastern University,** *Research Assistant,* Boston, MA June 2023 – August 2023

- Worked in Prof. Amirabadi's power electronics lab collaborating with PhD students and fellow interns to aid in furthering her research on transistor efficiency
- Led technical development process for portable solar-powered phone charger including in-depth research investigating power optimization techniques for both solar cells and device circuitry; prototyped and field tested before final fabrication
- Compiled research findings, product documentation, & analysis of charging results for presentation to other labs

## INDEPENDENT PROJECTS & LEADERSHIP

**McKelvey Fellowship** January 2025 - Present

- Executive Team member; fellowship for engineering students interested in entrepreneurship
- VP for New Member Education and Professional Outreach Sophomore & Junior year
- Revamped curriculum to focus on independent projects, cooperative learning, industry Q&A panels.

**Morse Code Decoder & Automated Light Switch** 2023

- Coded programs for decoding morse code sent by laser & for light switch triggered by specific clapping sequence
- Implemented Arduino devices that packaged lasers light sensor, and sound sensor to detect clapping

## SKILLS AND INTERESTS

- *Technical Skills: Java, Python, C, C++ , Arduino, CAD Modeling, Lathe, Mill, Soldering, 3D Printing*
- *Other skills: Organization of environment and people, collaboration with others, attention to detail, positive mindset*
- *Member: Engineering Test Kitchen (Project Lead), Society of Women Engineers, Alpha Phi International Fraternity*
- *Interests: Sailing, Surfing, Hiking, Skiing, Cooking, Fashion, Creative Design*