# Zoe Marazita

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## EDUCATION

**Pennsylvania State University** **Anticipated May 2027**

PhD in Mechanical Engineering | GPA: 4.0

**North Carolina State University** **May 2024**

B.S. in Mechanical Engineering | Minor: Mathematics | GPA: 3.96

**Awards**: 2025 NSF GRPF Honorable Mention, 2023-24 Engineering Faculty Senior Scholar

**Leadership:** Graduate Women in Engineering vice president, GOLD vice president, Makerspace Manager, Girls Engineering Change Executive Member, Lead Ambassador for Mechanical Engineering

## WORK EXPERIENCE

**Graduate Research Assistant** **May 2024 – Present**

*Penn State University – Open Design Lab and THRED Lab* *State College, PA*

- Developed AI-driven multivariate design tools to support ergonomic and universal design of products
- Integrated anthropometric datasets, statistical modeling, and simulation techniques to improve product accommodation across diverse populations
- Advanced equitable design approaches by addressing limitations in traditional one-size-fits-all models through data-informed tools

**Apple Inc.** **May – August 2024**

*Product Design Analyst Intern – Vision Products Group Ergonomics* *Sunnyvale, CA*

- Led analysis of anthropometric landmarks and designed experimental hardware in collaboration with the biomechanics team to inform part sizing, shape, SKU-count, and accommodation **(patent pending)**
- Designed and executed user-studies to provide key insights on product accommodation for outlier populations
- Was selected for a presentation to Mike Rockwell, VP of Vision Products

**Apple Inc.** **May – August 2022**

*Product Design Intern – Technology Development Group Ergonomics* *Sunnyvale, CA*

- Led adaptive band design for VisionPro to accommodate diverse populations **(patent pending)**
- Presented to VP Mike Rockwell, after being selected out of the 15 Product Design Interns

## TECHNICAL SKILLS

- **CAD:** Siemens NX, Solidworks, Creo, Rhino, Autodesk Inventor, Autodesk Revit, Fusion 360, AutoCAD
- **Tools:** Python, R, MATLAB, Grasshopper, Ansys FEA, rapid prototyping, CNC milling

## PUBLICATIONS

- **Marazita, Z.**, Chang, M., & Parkinson, M. (2025). *Quantifying the spatial requirements of seated individuals. International Journal of Industrial Ergonomics.* (under review)
- **Marazita, Z.**, & Parkinson, M. (in preparation). *Passenger perceptions of seating sufficiency, comfort, and acceptability in relation to seat width, load factor, and demographics.* Intended for submission to *Applied Ergonomics.*
- **Marazita, Z.**, Menold, J., & Parkinson, M. (in preparation). *An AI-based tool for multivariate design: Translating product requirements into data-driven specifications.* Intended for submission to *Applied Ergonomics.*

**Paper Presentations:**

- *Leveraging AI and Multivariate Analysis to Convert Product Requirements into Product Specifications.* Applied Human Factors and Ergonomics Conference (AHFE), December 2025.
- *Leveraging Public Review Data to Inform Product Sizing.* ASME IDETC Conference, August 2025.