Minneapolis, MN 612.790.3469 Izzie_mack@mde.harvard.edu

Isidora Mack

EDUCATION

Expected 05/2027

MS in Design Engineering

Harvard University, Graduate School of Design

GPA 3.33

Relevant Coursework: Computer Vision, Data Science

09/2019 – 05/2023

BS in Mechanical Engineering

College of Science and Engineering, University of Minnesota

GPA 3.815, *magna cum laude*

Minor: Product Design

SKILLS

Hardware & Prototyping

CAD (SolidWorks, Fusion 360, Onshape), rapid prototyping, 3D printing, laser cutting, design for manufacturing (DFM), FEA, DOE

Programming & Data

Python, MATLAB, C++, computer vision, data analysis

Tools & Visualization

KeyShot, Adobe Photoshop & Illustrator, Figma, Revit

HONORS AND CERTIFICATIONS

04/2024

Passed Fundamentals of Engineering Exam

National Council of Examiners for Engineering and Surveying (NCEES)

EXTRACURRICULARS

09/2019 – 05/2023

Vice President

University of Minnesota Robotics

- Secured $15,000 in funding for robot hardware, tools, and training resources.
- Organized technical workshops and industry networking events to support hands-on robotics development.

08/2015 – 05/2019

Design Captain

FIRST Tech Challenge (FTC) Robotics

- Designed and fabricated competition robots
- Led mechanical design strategy for teams competing at FTC World Championships (2017–2019).
- Created 11 robotics teams in underserved areas, scaling access to hands-on engineering education.

WORK EXPERIENCE

06/2023 – 12/2024

Fire Protection EIT

Leo A Daly – Minneapolis, MN

- Designed and reviewed life-safety systems, applying engineering codes, reliability principles, and failure-prevention strategies.
- Worked with large-scale, safety-critical systems requiring rigorous documentation and design reviews, and cross-disciplinary coordination.

06/2022 – 08/2022

R&D Engineering Intern

Boston Scientific - Arden Hills, St. Paul

- Conducted tensile testing and material characterization to evaluate candidate materials for electrical interconnects on PCBs in implantable cardiac devices.
- Designed and prototyped a custom antenna fixture, iterating through CAD and physical testing to support reliable device performance.

05/2021 – 08/2021

Medical Device Design Intern

Bakken Medical Devices Center - University of Minnesota

- Collaborated on the end-to-end mechanical design of a medical device to quantify skin fibrosis in lymphedema patients, translating clinical needs into engineering requirements.

06/2019 – 05/2020

Component Engineering Intern

Medtronic – Shoreview, MN

- Supported component engineering for implantable cardiac devices, managing design-change data and ensuring traceability across hardware revisions for regulatory review.

RESEARCH EXPERIENCE

09/2022 – 05/2023

Mechanical Engineering Undergraduate Researcher (Honors Thesis)

Design of Active Materials and Structures Lab with NASA Glenn Research Center - University of Minnesota

- Designed and mechanically analyzed load-bearing radial support structures for a non-pneumatic rover tire using shape memory alloy (SMA) elements, balancing compliance, durability, and manufacturability.
- Developed an analytical model of support-structure deformation under operational loads to inform and guide overall tire design decisions.

09/2020 – 05/2022

Wearable Tech Design Research Assistant

Wearable Technology Lab - University of Minnesota

- Designed user-facing hardware interfaces on wearables, combining microcontrollers, flexible materials, and custom 3D-printed components.
- Fabricated and tested knitted SMA samples, characterizing tensile behavior to inform future wearable actuator designs.

06/2018 – 08/2018

Computer Vision Research Assistant

Carleton College

- Developed a real-time computer vision pipeline in Python to detect faces and classify emotional expressions, applying machine learning and image processing techniques.