

Oscar Wilmerding

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Portfolio: <https://oewilmerding.wixsite.com/portfolio>

Education

Northeastern University, Boston MA May 2025

Candidate for Bachelor of Mechanical Engineering, Minor in Design

Courses: Thermodynamics, Material Science, Statics, Cornerstones of Engineering, Physics 1-2

Lick Wilmerding High School, San Francisco, CA May 2021

Activities: Cross Country (2x Team Captain), Track and Field (2x Team Captain), Soccer

Skills

Applications: SolidWorks, MATLAB, C++, Arduino, Python, Swift, KiCad, Excel, AutoCAD, Illustrator

Fabrication: FDM 3D Printing, PCB Design, Lathe, Mill

Professional Experience

Eink, Boston, MA January – June 2023

ePaper Product Development Engineer (coop)

- Collaborated with the development team to design and construct physically large projects, often managing individual assignments due to the rapid pace of progress.
- From concept to completion, engineered a robotic arm, fabricated an ultrasonic misting chamber, and programmed a Python-driven image analysis software.
- Pioneered among coop interns by being the first in seven to submit an invention disclosure form, marking progress in a proprietary technology for Eink.

Teen Treks, Buffalo, NY July – August 2022

Summer Camp Counselor

- Led a sleepaway bike trip from Amsterdam to Paris with five teenagers.
- Taught skills such as camping, cooking, bike mechanics, and fostered independence.
- Mediated conflicts between campers and taught healthy habits when working in groups.

Fiat Lux, San Francisco, CA November 2019 – April 2020

Jewelry Shop Intern

- Polished, sanded, and soldered jewelry to assist in production of high-end jewelry.
- Gained insights into the jewelry industry's design and production processes.

Projects

Kestrel Sensor (Sensor to monitor the elderly) May 2023 - Present

- Developed a non-intrusive sensor for elderly monitoring; envisioned as a potential startup.
- Assembled multiple sensor versions using custom PCBs, 20+ components, and a 3D printed case.
- Programmed a complete companion app on iOS and executed backend data processing with Python, AWS web services, and a MongoDB database.

Golf Cart Rewiring August 2022

- Swapped electric engine and replaced 80% of internal components for a 1990's Yamaha cart.
- Wired 30+ new connections, worked from a schematic, and found creative ways to fit new electric components into preexisting old hardware.

RFID Card Reader November 2021

- Collaborated with 5 people to implement the RFID reader into an interactive escape room.
- Prototyped and created an RFID card reader using SolidWorks. Utilized Arduino to detect a specific combination of RFID cards and display a code on an LCD screen.