MIRANDA BALTAXE

miranda.baltaxe@yahoo.com — +1 (571) 217-3145 — +44 7407472823

EDUCATION

BSE in Computer Engineering *(Embedded Systems Concentration)* | *Summa Cum Laude* **3.89 GPA**
University of Michigan, Ann Arbor

SKILLS

C/C++, Embedded Systems, Firmware Development, PCB Layout & Design (KiCad), MATLAB, Python, CAD (SolidWorks, Fusion 360, OnShape), Spanish (advanced), Project Management, Technical Communication

RELEVANT EXPERIENCE

Motion Metrics Ltd. (Carv) — Hardware Intern (Electrical) *London, UK | June 2025 - Present*

- Designed and laid out PCB motherboards and daughterboards in KiCad, integrating IMUs, microcontrollers, ADCs, and peripheral components for prototype skis.
- Developed custom firmware and drivers enabling smart skis to track boot pressure distribution and motion for balance-metric research supporting Carv's mobile app.
- Built a test device and firmware for coulomb counting to characterize battery performance and provide more accurate state-of-charge estimation in production devices.
- Performed hardware bring-up, debugging, and verification using oscilloscopes, JTAG tools, and custom test protocols, ensuring reliable operation across prototypes.
- Investigated and repaired warranty-returned devices, documenting root causes and proposing hardware and firmware improvements to increase long-term product reliability.

NewHaptics — Engineering Intern *Ann Arbor, MI | June 2023 - Aug. 2024*

- Prototyped a refreshable braille display with non-metal components for fMRI compatibility; deployed to Johns Hopkins researchers
- Developed MATLAB/Python scripts for client research applications, enhancing usability and adoption
- Coordinated directly with clients to define requirements and delivered a packaged device under tight deadlines
- Incorporated blind user feedback into iterative design improvements and documented modifications for future development

Arruda Lab — Research Assistant *Ann Arbor, MI | May - Aug. 2023*

- Designed and manufactured a modular imaging rig for ACL ligament research using SolidWorks and Form 3 printing
- Presented design reviews to Mechanical Engineering dept. chair and implemented feedback into prototypes

ROAHM Lab — Research Assistant *Ann Arbor, MI | Aug. 2020 - Dec. 2022*

- Researched hydraulically amplified self-healing electrostatic (HASEL) actuators for a soft robotic hand.
- Designed actuators with varying geometries, collected performance data, and developed MATLAB analysis methods.

ADDITIONAL EXPERIENCE

Big Wheel Bikes — Bicycle Mechanic *Arlington, VA | Jan. - June 2025*

- Repaired hydraulic brakes, drivetrains, and electronic shifting systems on road, mountain, and e-bikes.
- Assembled and tuned custom bike builds for optimal rider performance.

General Motors — Manufacturing Mechanical Engineering Intern *Romulus, MI | May - July 2021*

- Supported troubleshooting and process improvement on the High Feature V6 engine block line.
- Managed the engineering team for one week, coordinating mechanics and electricians to ensure on-spec production.

Leadership

- **Captain, University of Michigan Flywheel Ultimate (2019–2025):** Managed operations for 50+ athletes and six coaches, including scheduling, training, recruiting, and executive board leadership.
- **Regional Director, USA Ultimate - Great Lakes (2022–2023):** Directed logistics, compliance, and competition management for DI/DIII sectional and regional tournaments.