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**EDUCATION**

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University of Michigan, Ann Arbor

Graduating May, 2028

Double Major: *B.S, Computer Engineering and B.S, Robotics Engineering*

GPA: 3.91/4.0

- Classes: Electrical Circuits; Programming & Data Structures; Systems Engineering MBSE; Signals; Dynamics & Vibrations
- Dean's List (2024, 2025); University Honors; William J. Brainstorm Award

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**WORK EXPERIENCE**

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Nupeak Robotics

Vancouver, BC

*Embedded System Engineering Intern* | May, 2025 – Aug, 2025

- Designed multiple iterations, assembled, and tested 6 PCBs (**200+** components, **4** layers) using **KiCad**
- Wrote embedded firmware, enabling **SPI** and **I<sup>2</sup>C** communication with peripheral sensors and actuators (haptics)
- Developed multiple iterations of interactive UI for TFT Displays with **SquareLine Studio**
- Deployed **ROS Noetic** nodes on **RP2040** microcontrollers in **C/C++** under **Linux OS**

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**PROJECT EXPERIENCE**

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Michigan Advanced Robotics Competition

Ann Arbor, MI

*Captain + Co-founder* | November, 2025 – Present

- Co-founded and led a multidisciplinary robotics team; recruited founding members, established team structure, and registered the group as an official project team under the college of engineering
- Raised **\$7,500+** in initial funding by pitching a clear technical roadmap to faculty, advisors, and program leadership
- Built team infrastructure and set technical direction across software, mechanical, and electrical subteams
- Leading development of a **Supercapacitor Power Module** providing smart power assist for a high-agility infantry robot

University of Michigan Electric Boat

Ann Arbor, MI

*Embedded Hardware Lead* | September, 2025 – Present

- Led design of cockpit and telemetry boards in **Altium** using **STM32F4** for high-speed D-Stock boat racing application
- Designed a two-layer **rigid-flex** cockpit PCB with low-noise routing, multi-rail power management (48V–3.3V), and BJT-based HV/LV LED indication
- Impedance-matched GPS **antenna** routing and **optocoupled CAN** bus isolation to ensure signal integrity

*Steering System Lead* | August, 2024 – September, 2025

- Led the engineering of a lightweight hydraulics power steering and trimming system for **130+ mph** tunnel hull boat maneuvers
- Gained extensive hands-on experience with **OnShape**, **AutoCAD**, 3D printing, **TIG welding** & hydraulic hardlining

Siemens Space Robotics Project x University of Michigan - x88 Program

Ann Arbor, MI

*Software Engineer* | September, 2025 – Present

- Tested and calibrated OpenArm functionality through CAN and authored SOPs for software test and verification procedures
- Developed **SysML** requirement, block definition, and internal block diagrams in **Cameo/MagicDraw** to capture system architecture, interfaces, and functional decomposition; maintained requirements traceability and requirement-to-verification mappings
- Supported design reviews through requirements verification mapping, risk identification/mitigation tracking, and root cause analysis

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**RESEARCH EXPERIENCE**

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Atombot Research Team, by ZLab at University of Michigan

Ann Arbor, MI

*Embedded Hardware Engineer* | January, 2025 – January, 2026

- Designed and iterated **RP2350B** SoM board for robot joint actuator control with focus on signal integrity optimization
- Implemented ground plane stitching, controlled impedance differential pairs (length matching) for proper noise mitigation

*Machining Manager* | March, 2025 – January, 2026

- Oversee, process and organize all manufacturing processes and machines of **10+** subteams
- Automated 3D printing workflows in **Notion** and helped to build and improve the **DMC2 Mini Mill**
- Practical experience in **Vat Polymerization** and **FDM** 3D printing

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**CERTIFICATIONS, SKILLS & INTERESTS**

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- **Languages:** English (Bilingual); Mandarin (Bilingual); French (Limited Working Proficiency)
- **CAD/Software:** Altium; KiCad; LTSpice; OnShape; AutoCAD; Solidworks; SiemensNX (FEA); STAR-CCM+; NX NASTRAN; CATIA MagicDraw; Illustrator; Bambu Studio; Preform; Arduino IDE; Waveforms
- **Programming:** C++; C#; MatLab; ROS (noetic); Git; Julia;
- **Manufacturing:** Mill; Lathe; Aluminum & Steel TIG Welding; 3D Additive Printing; Resin Printing
- **Interests:** Basketball; Golf; Poker; Graphics Design; Drawing; Climbing