

Alexander Montesinos

Detroit, MI | montesin@umich.edu | alex-montesinos.github.io/portfolio | linkedin.com/in/a-montesinos | U.S. Citizen

EDUCATION

University of Michigan - Dearborn Expected May 2029

Bachelors of Science in Engineering, Computer Engineering

GPA: 3.0/4.0; Wolverine Pathways Scholar

Coursework: Engineering & Design, Multivariable Calculus, Physics 1

Detroit Cristo Rey High School Jul 2021 - Jul 2025

GPA: 3.5 + Dual Enrollment

AP & Honors, National Honor Society, Varsity Wrestler, MIT Introduction to Tech, Engineering, and Science Summer 24

WORK EXPERIENCE

Orange Sparkle Ball, Inc. (9-employee innovation consultancy) Detroit, MI

Detroit Operations Associate July 2025 - Present

- Manage and scale operations to support 3 pilots that led to 150+ successful robot dispatches and achieved a 98% partner satisfaction rate.
- Act as a technical liaison between Ottonomy.io and Fabit Robotics engineering teams to execute static and dynamic validation of robot hardware.
- Perform root cause analysis to troubleshoot complex system failures, resulting in a 40% reduction in downtime.

University of Michigan Engineering Zone Detroit, MI

FIRST Robotics Mentor Jun 2025 - Present

- Mentor students through command-based programming and CANbus architectures to 25+ *FIRST* robotics teams.
- Guide students in Java (WPIlib) and electrical integration, introducing AdvantageScope for live telemetry visualization to reduce code debugging time.

General Motors (Global Manufacturing Electrical & SDV) Warren, MI

Co-op Student Oct 2023 - April 2025

- Supported the Automotive Manufacturing & Electrical College (AMEC) in First Time Quality initiatives, gaining exposure to automotive electrical architectures and wire harness integrity.
- Constructed multiple training stands for wire harnesses, terminals, and CPA training.
- Assisted in onboarding 80+ Manufacturing and SDV engineers.

ACTIVITIES

***FIRST* Robotics Team 5577** Detroit, MI

Co-Captain/Controls Lead August 2021 - April 2025

- Led state qualifying team of 10+ high school students and oversaw all software, electrical, and pneumatics systems.
- Spearheaded the transition to a swerve drive system with closed-loop control and autonomous path planning.
- Developed autonomous algorithms using AprilTag localization for real-time field position tracking.
- Ran team-hosted Java programming and electrical workshops for middle and high school robotics teams.

VOLUNTEERING

Motor City Alliance (Nonprofit) Detroit, MI

Founding Member & Controls Specialist Aug 2021 - April 2025

- Contributed to sustaining robotics programs in Detroit with over 90+ elementary, middle, and high school robotics teams.
- Coordinated over 30+ volunteers for key events like kickoffs, workshops, and competitions.

SKILLS

Technical Skills: Java, MATLAB, C++, VS Code, Git, Version Control, Arduino, Fusion 360, 3D Printing, MS Office,

Languages: Fluent in English; Conversational Proficiency in Spanish

Awards: MITES MIT Top Team in Electronics (2024), *FIRST* Young Student Mentor Award (2023)