

# Alexander Montesinos

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

## EDUCATION

---

### UNIVERSITY OF MICHIGAN - DEARBORN

Expected May 2029

BE, 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 Student, National Honor Society, Environmental Justice, Varsity Wrestler

## WORK EXPERIENCE

---

### ORANGE SPARKLE BALL, INC. (9-employee innovation consultancy)

Detroit, MI

Detroit Operations Associate

July 2025 - Present

- Manage and scaled 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 validate robot hardware, troubleshoot robot systems, map delivery locations, document bugs, and provide field data which reduced failures by 40%.

### 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

Intern

Oct 2023 - April 2025

- Sole intern supporting the Automotive Manufacturing & Electrical College (AMEC) in manufacturing first time quality.
- 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

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 routines 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.

## ADDITIONAL

---

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

**Languages:** Fluent in English; Conversational Proficiency in Spanish

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