

# Alexander Montesinos

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## EDUCATION

<b>University of Michigan Dearborn</b> - BS, Computer Engineering	MAY 2029 (EXPECTED)
<ul style="list-style-type: none"><li>• Wolverine Pathways Scholar</li><li>• Multi-variable Calculus, Matlab, Fusion 360, Arduino</li></ul>	
<b>Detroit Cristo Rey High School</b>	JUNE 2025
<ul style="list-style-type: none"><li>• GPA: 3.5 + Dual Enrollment</li><li>• Calculus 1 at UDM, Calculus 2 at WCCCD, AP &amp; Honors Student, National Honors Society, Varsity Wrestler</li><li>• MIT Introduction to Technology, Engineering, and Science (MITES) - Summer '24 Alumni</li></ul>	

## WORK EXPERIENCE

<b>Orange Sparkle Ball, Inc.</b> - Detroit Operations Associate	JULY 2025 - PRESENT
<ul style="list-style-type: none"><li>• <u>Oversee robot operations in Downtown Detroit and Eastern Market</u> to insure successful pickups.</li><li>• <u>Collaborate with Ottonomy.io</u> engineers in troubleshooting robot performance issues.</li><li>• Assisted in recruiting and onboarding Detroit Operations Associates to support scaling robot pickups.</li></ul>	
<b>University of Michigan Engineering Zone</b> - Software & Electrical Mentor	JUNE 2025 - PRESENT
<ul style="list-style-type: none"><li>• Mentor high school students in Java robotics programming (WPILIB, REV Swerve drive, CANbus) and guide students integrated encoders and motor controllers for 125lbs competition robots.</li><li>• Lead students through wiring, troubleshooting, and hardware integration with CAN bus, encoders, and motor controllers.</li><li>• Guided students on using AdvantageScope for live data visualization, code simulation, and logging diagnostics.</li></ul>	
<b>General Motors (Global Manufacturing Electrical &amp; SDV)</b> - AMEC Intern	OCT 2023 - MAY 2025
<ul style="list-style-type: none"><li>• <u>Sole intern supporting the Automotive Manufacturing &amp; Electrical College</u> (AMEC) team in bettering first time quality.</li><li>• Supported multiple training stand builds for hands on learning with wire harnesses, terminals, and CPAs.</li><li>• Assisted onboarding of 70+ Manufacturing &amp; SDV engineers into AMEC curriculum.</li></ul>	
<b>iCode School Novi</b> - Senior Instructor	JUNE 2022 - AUG 2023
<ul style="list-style-type: none"><li>• Taught 100+ students Python, Java, HTML/CSS, vex robotics, 3d printing, electronics, game development, and astronomy.</li><li>• Contributed to curriculum adaptations for improved classroom engagement and easier class instructions for future instructors.</li></ul>	

## EXTRACURRICULAR

<b>FIRST Robotics Competition Team 5577</b> - Co-Captain	AUG 2021 - MAY 2025
<ul style="list-style-type: none"><li>• Led team of 10+ students and oversaw all software, electrical, and pneumatics systems integration.</li><li>• <u>Led the implementation of team's first swerve drive system</u> with functional swerve kinematics, path planning, and closed-loop control and developed autonomous routines using swerve drivetrain odometry and robot localization via AprilTags and Limelight which enabled real-time field position tracking.</li><li>• Developed automated command sequences for dynamic shooting calculations and auto alignment using AprilTag recognition and retroreflective tracking.</li><li>• Ran team hosted workshops and summer camps on programming and electrical systems for middle and high school students.</li></ul>	
<b>VOLUNTEER WORK</b>	
<b>FIRST Robotics</b> - Control Systems Advisor	NOV 2021 - PRESENT

<b>FIRST Robotics</b> - Control Systems Advisor	NOV 2021 - PRESENT
<ul style="list-style-type: none"><li>• Serve as a control systems advisor at FIRST middle and high school robotics competitions, providing guidance and technical support to teams.</li><li>• Troubleshoot and resolved complex system issues in real-time during competitions, helping teams overcome challenges and perform at their best.</li></ul>	
<b>Motor City Alliance</b> - Controls Specialist	AUG 2021 - MAY 2025
<ul style="list-style-type: none"><li>• Student lead and founding member of nonprofit "The Motor City Alliance" in <u>sustaining robotics programs in Detroit with over 90+ elementary, middle, and high school teams.</u></li><li>• Assisted in coordinating over 50+ volunteers for key events like kickoffs, workshops, and competitions.</li><li>• Provided hands-on guidance to middle school robotics teams on programming and electrical troubleshooting.</li></ul>	

<b>FIRST Robotics</b> - Student Mentor	SEP 2017 - NOV 2024
<ul style="list-style-type: none"><li>• Volunteered as a mentor for the FIRST robotics team at Escuela Avancemos Elementary School (FLL).</li><li>• Mentored Holy Redeemer's FIRST robotics middle school team (FTC).</li></ul>	

## AWARDS

MITES Top Team in Electronics (2024), FIRST Dean's List Award Semi-Finalist (2024), FIRST Young Student Mentor Award (2023)
<b>SKILLS</b>

Java, VS Code, Git, Matlab, MS Office, Windows, Google Workspace, Version Control, Self Learning, Bilingual: English & Spanish
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