

Santiago Quintana Moreno

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EDUCATION

Tecnologico de Monterrey

Computer Technology Engineering (Computer Science) GPA: 3.4 (Nov. 2024)

Monterrey, Nuevo Leon, Mexico

August 2023 – June 2027

EXPERIENCE

Robotics Mentor

May 2022 – Present

PrepaTec Overture 7421, 23550, 23619, 26381

Monterrey, Mexico

- Instructed up to 30+ students in wiring, electrical, C++, Java, Python, and WPILib, enabling advanced competition robot programming for seamless hardware-software integration.
- Educated up to 15+ students on data gathering, analysis and data-driven decision making through in-house scouting app development. Resulting in the Regional Winning Alliance in Monterrey Regional and Kansas Heartland Regional winners, as well as advancing up to semifinals in the World Championship in Houston.
- Guide team collaboration across three seasons, streamlining tasks and resources for prompt, efficient competition robot programming and electrical wiring. Provided leadership for 100+ students and mentorship during events, cultivating strategic decision-making, teamwork, and adaptability.
- Nominated to Wodie Flowers Mentorship award in the Monterrey Regional presented by PrepaTec in 2024.
- Across three seasons, I contributed as a mentor to a 63.6% win rate, with a total of 119 won matches and three regional wins.

PROJECTS

Overftclib | Java, Android, Gradle, Maven

2024 - Present

- Created and published the Overftclib a comprehensive library designed to modernize programming for FTC robotics competitions and facilitate a seamless transition to FRC-level programming.
- Developed features for motor control such as PID, Feedforward and Slew Rate to enhance motor control and allow for precise better movements and better performance in Autonomous operation.

FTC Webots Simulator | Java, Webots, Maven, Gradle

2024 - Present

- Developed and implemented a robotics simulation environment using Webots, tailored for FTC teams to conduct realistic testing and debugging without physical hardware.
- Allow seamless integration with Overftclib allowing teams to work with the same code as for the real robot.
- Focused on integrating sensor accuracy and motor control within the simulator, allowing teams to refine autonomous routines and troubleshoot software in a controlled setting.

SIGNIFICANT ACHIEVEMENTS AND CERTIFICATIONS

Goethe-Zertifikat B2: Three Month Certification in Advanced language skills and German Certification B2. 2023

Advanced Excel: Six-week Certification in Advanced Excel by Macquarie University. 2023

Human-Centered Artificial Intelligence: Two-week Certification on Machine Learning, algorithms, Artificial Neural Networks by Tecnológico de Monterrey. 2024

Deep Learning for business: Two-week Certification in Deep Learning for business. 2024

MLH HackMtY 2024: Participated in Latin America's largest Hackathon, with a successful result.

Outstanding Trajectory 2024: Recognized as the 1% of students with an outstanding trajectory by the School of engineering and science from Tecnológico de Monterrey.

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, LaTeX

Developer Tools: Git, Github, VS Code, Arduino IDE, Android Studio, JetBrains IDE, Jupyter, MatLab

Libraries: NumPy, Matplotlib, mpltoolkits, mplot3d, Axes3D, WPILib, FTCLib, RoadRunner

General Software: Microsoft Office, GSuite, Notion, Slack

Languages: Spanish (Native), English (C1), German (B2)

SOCIAL SKILLS

Social Skills: Adaptability, Effective Communication, Decision-Making, Problem-Solving, Teamwork