

# EDISON ALTAMIRANO

Robotics Engineer

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## LANGUAGES

Spanish Native ●●●●●  
English Proficient ●●●●●  
French Intermediate ●●●●●

## SKILLS

MATLAB	AUTOSAR	ROS2
ROS1	C	Python
Flutter	C++	ReactJS
PLC	KiCad	LTspice
AWS	GCP	

## PUBLICATIONS

Visual Navigation Algorithms for Mobile Manipulators in Service Shops  
11/2023  
[https://doi.org/10.1007/978-3-031-47640-2\\_19](https://doi.org/10.1007/978-3-031-47640-2_19)

Towards a Mixed Virtual Reality Environment Implementation to Enable Industrial Robot Programming Competencies within a Cyber-Physical Factory  
05/2023  
<https://doi.org/10.1109/EDUCON54358.2023.10125175>

A Digital Twin implementation for Mobile and collaborative robot scenarios for teaching robotics based on Robot Operating System  
03/2022  
<https://doi.org/10.1109/EDUCON52537.2022.9766583>

Work in Progress: Implementation of a Digital Twin as Technology to support Discrete Event Control Teaching  
03/2022  
<https://doi.org/10.1109/EDUNINE53672.2022.9782154>

## CERTIFICATION

Convolutional Neural Networks

DeepLearningAI (sept.2019)

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization

DeepLearning.AI (jul.2019)

Structuring Machine Learning Projects

DeepLearning.AI (jul.2019)

Neural networks and Deep Learning

DeepLearning.AI (jun.2019)

## EDUCATION

Digital Systems and Robotics Engineering  
Instituto Tecnológico y de Estudios Superiores de Monterrey ITESM  
08/2018 - 06/2023

## EXPERIENCE

### Application Engineer

ZF Group 11/2023 - Present Monterrey, Mexico  
ZF is a global technology company supplying systems for commercial vehicles.  
• Develop custom controllers for next-gen hydraulic axle modulators using Matlab and Vector software tools, ensuring Autosar compliance.

### CTO

CHAKRI 08/2020 - Present Quito, Ecuador  
CHAKRI is a farm-to-home delivery platform for fresh groceries.  
• Led development of 3 mobile apps for iOS and Android, alongside a logistics website linking local farmers and consumers, eliminating intermediaries. Engineered advanced algorithms for routing and delivery, automated logistics using cloud computing, and managed backend and frontend development of mobile apps. View the apps on Play Store or App Store: [Link](#)

### ADAS Validation Engineer

ZF Group 08/2022 - 06/2023 Monterrey, Mexico  
• Led hardware and software development for Mexico's first autonomous shuttle, overseeing the acceleration module and light control system. Employed ROS2, STM32, and CAN for integrated module control. Recognized by **top executives** from **BYD** and **ZF** during key demonstrations. Watch the project in action: [Link](#)

### Supply Chain Management Intern

John Deere 01/2022 - 02/2023 Monterrey, Mexico  
John Deere leads in providing advanced products for agriculture and construction worldwide.  
• Implemented SAP Automation using ABAP programming, Microsoft Azure, Microsoft Power Platform, and Amazon Web Services applications to enhance supply management team performance.

### Robotics Researcher and Project Manager / Campus Job

Tecnológico de Monterrey 01/2019 - 08/2022 Monterrey, Mexico  
• Integrate Warehouse Fleet Management with AGV and create technology to handle them using reinforcement learning, PLC, and industrial communication protocols.  
• Trained {20+} professors in advanced robotics integration techniques for manufacturing applications.

## AWARDS

 Most Consistent Solution in AIRLab Stacking Challenge  
Hosted in the Netherlands, watch the project in action: [Link](#)

 7 awards granted during RoboBoat, RoboSub 2020-2022  
Hosted in the US : <https://robonation.org/>

## LEADERSHIP AND PROJECTS

### Lead Software Engineer

Vanttec 08/2020 - 06/2023 Monterrey, Mexico  
<https://www.instagram.com/vanttec/>  
• Integrated control, vision, and navigation systems for virtual and real submarines in RoboSub and Roboat competitions from 2020 to 2022. Watch the project in action: [Link](#)

### Software Developer

RoBorregos 10/2022 - 06/2023 Monterey, Mexico  
<https://roborregos.com/>  
• Developed an autonomous butler for the RoboCup @Home category in 2022-2023. Managed robot's SLAM and planning system. Watch the project in action at the IROS event in Japan: [Link](#)