

Eduardo Hernández Valdez

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EDUCATION

Instituto Tecnológico y de Estudios Superiores de Monterrey

Major in Robotics and Digital Systems; 90.26

Monterrey, México

Summer 2026 (Expected)

PrepaTec Eugenio Garza Lagüera

High School Diploma; 90

Monterrey, México

Aug 2019 – Jun 2022

RESEARCH EXPERIENCE

VantTec - Self Driving Vehicle

Embedded and Electronics Research and Development Intern

Monterrey, México

Jan 2023 – Present

- Worked on pcb design regarding certain criteria needed to be met, using KiCAD. Managed to translate prototypes to functional boards needed as functional systems inside the vehicle. (STM32, Electric circuitry)
- Created a "from-scratch" python implementation to receive data from CANbus based sensors, such as rotary encoders and radars. This, to be used for the vehicle as an interface through ROS 2. (Briter Encoder, Ainstein T-79 Radar)
- Reverse engineer already existing systems on the vehicle to document them.

VantTec - Unmanned Surface Vehicle

Perception Research and Development Intern

Monterrey, México

Aug 2022 – Present

- Created datasets for the training of a neural network to detect and classify objects in the water, aiding to the vehicles self navigation for the Roboboat competition.
- Developed on-demand computer vision algorithms regarding the vehicle's needs in each section of the competition using OpenCV and ROS 1. (Dice number and color recognition, special symbology recollection, etc)
- Arranged environment running on specialized hardware to support the vehicle's perception system. (Nvidia Jetson TX2, Raspberry Pi)
- Work on a platform to support the boat's shooting system using ROS2, modelling the system using Gazebo.

WORK EXPERIENCE

Freelance

General Purpose Programming – <https://www.fiverr.com/eduarch42>

Remote

Intermittent Summers

- Developed solutions for clients in various fields, including Data Science, Backend Development, GUI Desktop Applications, with an overall 4.9/5 rating.
- Worked with clients from all around the world, including countries like the United States, Canada, the United Kingdom, Australia, Sweden, Germany, etc.

AWARDS & ACHIEVEMENTS

HackMTY 2022 Hackathon – 1st Place in Chubb's sponsored challenge.

Hackathon Banorte 2023 – Finalist team.

International Collegiate Programming Contest – Top 7 within ITESM MTY.

Concurso Internacional de Ciencias – Finalist in Computer Science category.

SKILLS

Programming: *Proficient;* Python, Go. *Intermediate;* C, Rust, Javascript, Matlab. *Beginner;* C++

Technologies/Software: Linux, Docker, GNU Debugger, (C)Make, Git, KiCAD, ROS[1,2], FreeCAD, OpenCV

Languages: Spanish (Native), English (Professional), German (Elementary)



LinkedIn



Github



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