

Ivan Alberto Romero Wells

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EDUCATION

Monterrey's Technological Institute of Higher Education

Bachelor of Computer Science Engineering and Technology

Graduating in December 2025

GPA 97/100

WORK EXPERIENCE

Oneila

Software Engineer Intern

Monterrey, Nuevo León, México

June 2022 – January 2023

- Developed a scraper made with Beautiful Soup to keep track of articles information listed on eBay.
- Developed Unit testing and worked on the management of CI/CD and Git version control with Azure DevOps.
- Developed a Scraper with Crawllee and Puppeteer built to access public Mexican government data.

Micronics MX / Bustracker

Software Engineer Intern

Monterrey, Nuevo León, México

September 2021 – June 2022

- Helped on migration of pages from WordPress to React.js, and implementation of components based on ant design.
- Developed administrator pages for managing of business units and commercial groups, using React.js and Laravel.

MAJOR PROJECTS

RoboLinks

Url shortener made for the RoBorregos team (Tec de Monterrey's International Robotics team).

August – September 2022

- Developed a Next.js app, using React.js for the front-end and Chakra-UI for the UI Library.
- Implemented a RESTful API for the backend with MySQL as the DB, and Prisma as the ORM. Built with routing and API Tools from Next.js.
- Deployed the MySQL database with the RDS service of AWS and deployed the Next.js project on Vercel. rbrgs.com

IoT Warehouse

A Warehouse system to manage and track material of the RoBorregos Development Laboratory

September – December 2022

- Developed a Next.js app using React.js and Mantine for the UI, and used a MySQL DB deployed on AWS, Prisma and Socket.io for the Backend, and deployed it with Vercel
- Built a WebSocket server with node and Socket.io to manage and communicate the physical cells, and the RFID authorization modules. And deployed it to AWS using the Elastic Beanstalk service

IROS @Home Simulation

Developed and integrated the machine vision algorithm for the competition using ROS and Python.

August – October 2022

- Developed and trained the object detection pipeline using Python and TensorFlow.
- Implemented a human pose estimation system using Python's OpenVision and the pretrained model from MediaPipe.

RoboCup Junior Rescue Maze

A Robotics automatization competition, based on the rescue of victims in a dangerous scenario.

January – May 2022

- Implemented a navigation algorithm using Dijkstra's algorithm and made an integration with Robotics Operating System (ROS) framework to control sensors and actuators via serial communication.
- Implemented a computer vision algorithm and developed an image classification model by implementing a Convolutional Neural Network (CNN) using TensorFlow to detect lettered and colored visual victims in the stage.

Mexican Informatics Olympiad

Participated in the regionals at Baja California, Mexico. Coding in C++.

2019 - 2021

- Won Bronze (2019), Silver (2020) and 5th place (2021) at the regional qualifying stage

SKILLS

PROGRAMMING LANGUAGES

3 years: Python, JavaScript
2 years: C/C++, TypeScript
6 months: PHP, Matlab

TECHNOLOGIES

Next.js, MySQL, SQLite, Amazon Web Services (AWS), Azure DevOps Services, Heroku, RESTful API, Flask, Node.js, TensorFlow, C++, ROS, Arduino, React.js, Git, VS Code, Socket.io, Express, Unix/Bash, Prisma, Laravel, Insomnia, tRPC, OAuth

AWARDS

3rd Place – Meta Coding Competition Mexico Universities (2022)
5th Place – IROS 2022 (Japan) RoboCup @Home Simulation (2022)
4th Place – RoboCup Junior Rescue Maze (2022)

LANGUAGES SPOKEN

Spanish Native
English TOEFL iBT 92