Ricardo Gutierrez Juarez

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Education

INSTITUTO TECNOLÓGICO DE MONTERREY   Guadalajara, MX.
B.S. in Robotics and Digital Systems Engineering   *Aug. 2022 - Jun. 2026 (Expected)*
- **Cumulative Average:** 95/100
- **Relevant Coursework:** Object Oriented Programming, Engineering Modelling with Computational Mathematics, Data Structures and Fundamental Algorithms Programming, Internet of Things Implementation, Minimum Systems Modelling and Computational Architectures, Analysis of Differential Equations, Foundation of Electrical and Electronic Engineering.

Experience

Chief Operating Officer   May 2025-Present
Clínica de los Remolques (ClinRem)
- Managing cybersecurity measures, vulnerability assessments, and compliance with security standards to protect company data and systems.
- Overseeing administrative tasks such as budgeting, financial tracking, and client quotations to ensure cost efficiency and accurate proposals.
- Coordinating IT and financial strategies with management to improve operational performance and system reliability.

Student Validation Intern   May 2024-Noviembre 2024
Intel
- Developing test cases for tools that the client and intel use to validate some aspects of the Atom Processor.
- Developing automation scripts for the validation team, using tools like, celery, jenkins, airflow and Figma.
- Developing front-end and back-end of tools for the automation team.

Projects

Agriculture SAGE Robot   Aug 2024 - Dec 2024
Tecnológico de Monterrey & Schaeffler Technologies
- Designed and implemented a distributed architecture for an autonomous agricultural robot using Raspberry Pi (edge processing), STM32 (low-level real-time control), and PC (AI-based anomaly detection).

- Enabled modular communication and coordination between hardware layers for sensor acquisition and actuator control in real-time.
- Developed in Python (high-level processing) and C (embedded systems) under FreeRTOS; used SolidWorks for mechanical modeling.
- Integrated computer vision techniques for crop anomaly detection and system diagnostics.

Pong Game In Verilog   March 2024

Tecnológico de Monterrey
- Using verilog we program a pong system using an accelerometer in a FPGA, called DE10 Lite. Creating a testbench in each module.

NutreRed   Sep 2023

HackMTY 10th edition
- In the largest Hackathon in Latin America, we created a website to move services in an efficient way, this was made for low resources communities to give the food.

Sequence alignment and phylogenetic trees   April 2023 - May 2023

Tecnológico de Monterrey
- Using the R programming language, DNA chains of Sars-Cov-2 variants, from different countries obtained from NCBI, were made from fasta format files. This is to make a comparison of these variants to determine their similarities and differences.

DVD databases   March 2022 - April 2022

Tecnológico de Monterrey
- Using the Python language, a database was created with a list of DVDs for a rental location. It is saved in an XML file, for obtaining and editing this file.

Augmented reality glasses, with calculator system   March 2019 - April 2019

Thomas Alva Edison College
- Through language C++, a tool was created to carry out quick operations, through an augmented reality system. This worked through the reflectivity of an OLED screen. The purpose of this project was to introduce augmented reality practices in hardware and software, for more advanced practices.

Colorimetry tracking by camera   February 2019 - April 2019

Thomas Alva Edison College
- Through language C++, a tracking car with a PIXY camera was created, for the development of advanced sensor practice skills.

SKILLS

Programming Languages: Python, C++, MATLAB platform, R, JavaScript, Html, CSS, Verilog, G-Code, Groovy, Assembler.

Languages: Spanish, English C1.

Developer Tools: VS Code, Jupyter Notebook, Anaconda, Autodesk Fusion 360, SolidWorks, Airflow, Jenkins, RabbitMq, Ollama, Figma.

Libraries: Pandas, NumPy, Argparse, Celery.

RECOGNITIONS

- First place in INTERNATIONAL SPACE SETTLEMENT DESIGN TOURNAMENT 2022 (ISSDT).
- First place Robotics tournament in the western region (2018).
- 3rd place in the State Mathematics Competition (2018).