

Rogelio Villarreal

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Education

Tecnológico de Monterrey

Monterrey, NL

Bachelor of Science in Computer Science and Technology

August 2023 – June 2027

- GPA: 93.1/100 (3.73/4.0)
- Key Coursework: OOP, Data Structures and Algorithms, Database Management Systems, Software Construction, Multi-Agent Systems and Computational Graphics, Cybersecurity.

Experience

Hanova Consulting

Monterrey, NL

Junior Software Engineer

July 2025 – Present

- Developed an insurance policy management system, integrating OpenAI-powered data parsing and OCR processing, integrated with Odoo. Python backend-focus with database logic for policy-claim management.
- Inherited and maintained a FastAPI microservice with Selenium automation bots for insurance portal operations, webhook integrations, database operations, and end-to-end testing across multiple insurance providers.
- Created and implemented a realtime n8n data transformation pipeline from spreadsheet to a CRM, reducing time spent inputting data by 95%.
- Spearheaded adoption of GitHub Issues and Projects company-wide, establishing standardized workflows for bug tracking, feature requests, and release management across all projects.

Projects

MACHTIA | *Python, FastAPI, Swift, SwiftUI, PostgreSQL, pgvector*

October - December 2025

- Implemented RAG system with semantic search, vector embeddings, hybrid search, and AI chat assistant integrated with Apple Intelligence tools.
- Developed full-stack educational platform with FastAPI backend, Streamlit admin interface, and native iOS app using PostgreSQL with pgvector for vector similarity search.

Cappie - Capital One HackMTY 2025 Challenge | *Swift, MySQL, FastAPI, Python*

October 2025

- Developed Cappie for HackMTY 2025's Capital One challenge: an AI-powered banking app with personalized financial coaching.
- Developed FastAPI backend integrating MySQL and Google Gemini API for AI-driven expense categorization and savings recommendations.
- Implemented REST API endpoints for real-time spending analysis, goal tracking, and automated transaction classification.

OXXO Training Program | *C#, MySQL, WebGL, ASP.NET, JavaScript, HTML5/CSS3*

February - April 2025

- Developed a full-stack training platform for OXXO store advisors using ASP .NET Core (REST API) and Razor Pages, integrated with Unity WebGL for immersive scenarios.
- Implemented modular C# backend services for session lifecycle, check-in/check-out workflows, authentication, and decision-tracking, supporting up to 1,000 concurrent users.

Technical Skills

Programming Languages: Python, C++, JavaScript, , C#, Swift

Web Technologies: Oracle APEX, Odoo, FastAPI, RESTful APIs

Developer Tools: Git, Visual Studio Code, Unity, XCode, n8n

Databases: MySQL, Firebase, Postgress, MongoDB

Core Concepts: Object-Oriented Design, Data Structures, Algorithms, Software Development Life Cycle

AI/ML Tools: Google Gemini API, OpenAI API (GPT), NLP (Natural Language Processing), OCR (Optical Character Recognition)

Languages

English: Near-Native (Cambridge English: Advanced (C1), TOEFL iBT 110)

Spanish: Native