Axel Eduardo Iparrea Ramos

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EDUCATION

Tecnológico de Monterrey, *Computer Science* 🔗   Monterrey, México
Ranked as the top university in Mexico and among the most prestigious in Latin America, Tecnológico de Monterrey is recognized for its academic excellence and innovative approach to education. During my studies, I developed strong competencies in software engineering, web technologies, and cybersecurity using tools and languages such as JavaScript, Python, C++, React, Node.js, and Linux environments.

PROFESSIONAL EXPERIENCE

ESAB, *Data Automation & Cloud Engineer*   Jan 2025 – present | Monterrey, Mexico
- **Automated** data workflows using **Python** and **SQL**, enhancing operational efficiency and accuracy.
- **Developed** dynamic dashboards with Power BI and **Power Query**, delivering actionable insights and real-time visualization.
- **Created** automation bots integrated with **Azure**, streamlining operations and reducing manual effort and costs.
- **Leveraged SAP process** knowledge, particularly in finance, ensuring seamless data integration for informed decision-making.
- **Automated and optimized SAP data workflows**, improving data accuracy, reducing manual effort, and accelerating production decision-making

Tec de Monterrey, *Full Stack Developer, internship service*   Sep 2024 – Nov 2024 | Monterrey, Mexico
- **Maintained** and **enhanced** the **Wellness App** for **Tec de Monterrey (Campus Monterrey)**, utilizing **Prisma**, **MVC architecture**, and **Express**.
- **Implemented** full-stack solutions with **Node.js**, **TypeScript**, **React**, **Axios**, and **Tailwind CSS** to deliver seamless user experiences.
- **Optimized** backend functionality and **refined** API integrations to improve system performance and reliability.
- **Built** scalable and maintainable systems, ensuring efficient client-server communication and sustainable code architecture.

MAJOR PROJECTS

Cybersecurity KALI Linux   Jan 2021
Skilled in penetration testing and network security using Kali Linux. Expert in **proxy chains** and **network proxies** to anonymize attacks and bypass defenses. Proficient with tools like **Nmap**, **Metasploit**, and **Wireshark** for vulnerability assessment and exploitation. Strong background in **password encryption/decryption** and **wireless security testing**. Adept at scripting in **Bash** and **Python** to automate tasks. Experienced in **social engineering**, **phishing simulations**, and incident response. Expert in frameworks like **NIST** and **OWASP**.

AWAQ Web Page Onboarding   Feb 2024 – Jun 2024
Developed a comprehensive web page using **Razor Pages in .NET Core 8.0** for the **AWAQ Association**. Implemented an advanced administrative **dashboard** that provides detailed insights into employee progress and manages onboarding activities efficiently. The dashboard enables administrators to monitor performance metrics and maintain control over the onboarding process. Seamlessly integrated an **SQL database** to store user data and track game progress, ensuring **smooth interaction** between the web platform and the 2D onboarding video game.

LegalMatch, *Android App KOTLIN*   Aug 2024 – Oct 2024
Developed a feature-rich **Android app** for a **law firm (BuffeTEC)**, enabling clients to schedule and manage appointments, create case records, and view case history. Integrated **AI** through **Gemini** to automatically enhance case details and streamline processes. Built with **Kotlin** and **Jetpack Compose** for a seamless **UI** experience, leveraging Supabase for backend authentication and database management.

Urban Mobility Multi-Agent Simulation, Python & Unity   Apr 2024 – Jun 2024
Engineered a real-time urban intersection simulation using Python (AgentPy) and Unity. Modeled autonomous vehicles, pedestrians, and traffic lights to optimize flow and safety. Integrated a Flask API for backend-frontend communication. Utilized Git for collaborative version control.
Skills: Python, Unity, AgentPy, Flask, Git, multi-agent systems, reinforcement learning, simulation modeling, real-time data integration, traffic optimization

SAP Labs Collaboration – 1st Place Project: AI-Powered Smart Supply Chain,   Feb 2025 – present
🏆 *Winner – SAP Labs Final Showcase 2025*
Collaborated with a multidisciplinary team to build **SAPITOS**, an award-winning smart supply chain solution for a boutique apparel SME, focused on automating and optimizing logistics using SAP technologies.
- Developed a **cloud-based infrastructure** using **SAP S/4HANA** to manage inventory, delivery, and ordering processes.
- Built a **secure OTP verification system** to enhance authentication and system access.
- Implemented **advanced analytics dashboards** with **SAP Analytics Cloud** for real-time supply chain monitoring.
- Designed a **predictive ML model** with **SAP HANA ML** (Hybrid Gradient Boosting Tree) to forecast inventory needs based on sales, seasonality, and trends.
- Integrated an **AI assistant powered by OpenAI**, allowing users to query business insights using natural language.

PARTICIPATION

Participation Hack Mty 2022 🔗   Sep 24, 2022
Software Used: **MERN**
Developed an engaging web application for **Banorte** aimed at attracting and retaining a younger demographic. The project focused on enhancing user experience to drive youth engagement and boost sales, successfully launching a dynamic, youth-oriented web platform

SKILLS

Programming Languages: HTML5 / CSS, JavaScript, Python, C++, C, Matlab, C#, Shell, Assembly, PHP, Kotlin, Perl, Ruby
Frameworks, Tools: .NET Core 8.0, NodeJS, Express.Js, Next.Js, React, Unity, Prisma, Mysql, Tailwind CSS, Axios, Azure cloud computing, AWS Cloud, Agile methodology
Languages: English (Native), Spanish (Native), Italian (Basic)

COURSES

Full Web Design, API, JavaScript, *UDEMY*

Generative AI, *NVIDIA*

AWS Amazon course, *Amazon*