Axel Eduardo Iparrea Ramos

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PROFILE

Full Stack Developer & AI Solutions Engineer with expertise in end-to-end web application development and intelligent automation. Proven experience building scalable applications using React, Node.js, .NET Core, and modern cloud technologies. Strong background in ERP integration, database design, and AI-powered solutions. Combines frontend user experience with robust backend architecture to deliver enterprise-grade applications.

Web Portfolio: https://axeliparrea.com 🔗

PROFESSIONAL EXPERIENCE

Technical Lead & AI Ambassador, ESAB   Jan 2025 – present │ Monterrey, Mexico
- **Developed intelligent chatbots** for multiple business areas using Microsoft Copilot, automating employee queries and streamlining departmental workflows.
- **Built AI agents integrated with SAP and JDE ERP systems,** enabling natural language interactions with enterprise data and business processes.
- Created custom **Power Apps** solutions for field workers, providing mobile access to critical business functions and real-time data synchronization.
- **Automated data workflows using Python and SQL**, enhancing operational efficiency and reducing manual data processing across ERP systems.
- Implemented end-to-end **AI automation solutions** that improved response times by 70% and reduced IT support tickets by 45%.

Full Stack Developer, internship service, Tec de Monterrey   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.

EDUCATION

Tecnológico de Monterrey, Computer Science 🔗   Monterrey, México
Developed expertise in **software engineering, AI/ML algorithms**, and **enterprise systems integration** through hands-on projects with real-world companies.

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.

SKILLS

- **Programming Languages**: HTML5 / CSS, JavaScript, Python, C++, C, Matlab, C#, Shell, Assembly, PHP, Kotlin
- **Frameworks & Tools:** .NET Core 8.0, NodeJS, Express.js, Next.js, React, Unity, Prisma, MySQL, Tailwind CSS, Axios, Azure Cloud, AWS Cloud, Microsoft Copilot Studio, Power Platform (Power Apps, Power Automate, Power BI), SAP, Agile methodology
- **AI & Automation**: Microsoft Copilot, Power Platform, AI Agent Development, Process Mining
- **ERP & Enterprise Systems**: SAP S/4HANA, SAP ABAP, SAP HANA, SAP Analytics Cloud, ERP Integration, Business Process Optimization
- **Languages:** English (Fluent), Spanish (Native), Italian (Basic)