

Estefania Marmolejo Sandoval

Nayarit, Mexico

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SUMMARY

AI & Systems Engineer focused on building systems that model and analyze complex data flows from real-world environments. Experienced in applied machine learning, data modeling, and system design, with interests in human dynamics, intelligent systems, and decision-support applications.

SKILLS

Python, Java, C#, JavaScript, SQL, PostgreSQL, MongoDB, AWS, Azure, GCP, Oracle Cloud, ETL pipelines, Data Engineering, Machine Learning, Generative AI, Llama ecosystem, REST APIs, CI/CD, Postman, Docker, Git, Data Analysis, Anomaly Detection, Real-time Data Processing, Decision Support Systems, IoT Systems, Embedded Systems, OpenShift, Figma, Applied AI tools, React Native, OT/IT Security, Alembic / SQLAlchemy

WORK EXPERIENCE

Mxmart Solutions

AI & Data Engineer

Aug 2025 - Present

Jalisco, Mexico

- Designed and deployed a serverless architecture on Azure for automated document information extraction, utilizing Python, Azure OpenAI, and Document Intelligence models.
- Built and optimized AI pipelines for data extraction, validation, and persistence using PostgreSQL, SQLAlchemy, and Alembic.
- Developed secure REST endpoints for the integration of document processing systems, ensuring robust security measures for data management.
- Created dynamic Excel report generation tools and implemented AI usage and cost tracking per user, optimizing model deployment efficiency.
- Integrated a Next.js, TypeScript, and Tailwind CSS frontend, incorporating administrative modules and real-time notifications with Cloud Pub/Sub and WebSockets to enhance system performance and user experience.

Mxmart Solutions

Cloud & Data Engineer

Jan 2025 - Aug 2025

Jalisco, Mexico

- Co-designed and deployed a hybrid cloud fleet management system, leveraging AWS, Azure, and GCP to ensure scalable, secure, and high-performance data flows across logistics operations.
- Developed SQL/Python data pipelines for data extraction, transformation, and loading (ETL), optimizing the flow of logistics data and integrating it into the cloud infrastructure.
- Built real-time dashboards using Power BI to provide key performance indicators (KPIs) for fleet operations, improving decision-making and operational efficiency.
- Collaborated with cross-functional teams to ensure seamless data integration between cloud platforms and on-premise systems, optimizing overall system performance and data accessibility.

ECN Automation

Internship

Aug 2024 - Jan 2025

Sonora, Mexico

- Designed and deployed a scalable industrial monitoring system to integrate IoT sensors and provide real-time data for critical system monitoring, ensuring high availability and system resilience.
- Developed a data gateway and processing layer to handle noisy sensor signals, ensuring data quality, temporal consistency, and system reliability for continuous monitoring.
- Modeled sensor data and system events to enable pattern analysis, anomaly detection, and decision support, bridging raw physical signals with actionable insights.
- Built human-centered dashboards using Grafana to visualize system states, KPIs, and alerts, supporting operators in real-time interpretation and decision-making.
- Collaborated with multidisciplinary teams to ensure scalability, robustness, and seamless integration between hardware components and software systems.

PROJECTS

Memora – AI & Mobile App for Alzheimer's Support

Founder & Project Lead

May 2025 - Present

Nayarit, Mexico

- Developing a mobile application with AI for Alzheimer's support, focused on providing reminders for medication, appointments, and daily tasks, as well as generating summaries for caregivers. Although currently in development, the project is aimed at improving patient autonomy and easing caregiver responsibilities. The app integrates AI chatbots to enhance communication and assist in memory-related tasks, using React Native and natural language processing (NLP) technologies.

DELFIN Research Summer MMXXIII

Jun 2023 - Aug 2023

Research Project Participant

Cartagena, Colombia

- Collaborated in an international research project at Universidad Tecnológica de Bolívar, focused on detecting hate speech and homophobic content on social media platforms using NLP and machine learning techniques.
- Employed text classification models and sentiment analysis to identify and categorize harmful language, contributing to the development of more accurate detection algorithms.

IX International Meeting of Research Internships DELFIN 2023

Jul 2023 - Jul 2023

Speaker

Manizales, Colombia

- Presented the project titled "Detection of Homophobic Messages on Social Networks" as a speaker at the IX International Conference of Research Internships DELFIN 2023, focusing on the use of NLP and machine learning techniques for detecting harmful content on social media platforms.
- Engaged with an international audience, contributing to the academic exchange on AI ethics, content moderation, and social media impact.

EXTRACURRICULARS

SoftServe

Sep 2025 - Present

Program Participant

- Database Fundamentals Program – Selected participant in a professional training program focused on relational databases and SQL.
- Linux Fundamentals Program – Hands-on training in Linux system administration, shell scripting, and server management.

LLaMA ecosystem for AI development

Aug 2025 - Sep 2025

Program Participant

- Completed a 14-hour Bootcamp organized by Meta and INFOTEC, focused on retrieval-augmented generation (RAG) and semantic search integration within AI workflows.
- Gained hands-on experience in structuring RAG pipelines for efficient knowledge retrieval, and explored the application of vector stores to enhance AI-driven semantic search capabilities at scale.
- Developed a deeper understanding of LLaMA ecosystem tools for AI development, focusing on custom knowledge integration and improving AI systems' efficiency in large-scale data processing.

EDUCATION

Instituto Tecnológico de Tepic

May 2019 - May 2025

Computer Systems Engineering

GPA: 92.4

CERTIFICATIONS

IELTS Academic (Band 7.5)

Demonstrates proficiency in the English language, with a focus on academic and professional settings. The certification covers reading, writing, listening, and speaking components, ensuring effective communication in both research and international professional environments.

AWS Certified Cloud Practitioner

This certification validates foundational knowledge of AWS cloud services. It covers cloud computing concepts, AWS core services, security and compliance, and cloud architecture principles. This certification enables me to design and implement cloud-based infrastructure efficiently.

Azure Administrator Associate (AZ-104)

Focuses on the skills required to manage Azure subscriptions, virtual networks, and storage solutions. This certification demonstrates my proficiency in managing Azure cloud resources, deploying virtual machines, configuring networks, and ensuring the security and scalability of cloud environments.

Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate

This certification provides foundational knowledge of Oracle's AI tools, focusing on the integration and deployment of machine learning models, data analysis, and automation within Oracle Cloud environments. I have learned to apply AI models to build scalable systems using OCI technologies.

Oracle Cloud Infrastructure 2025 Certified Generative AI Professional

Specializes in the application of Generative AI within Oracle Cloud services. The certification covers areas such as NLP, image generation, and creating custom AI models to enhance the development of AI-driven systems in various industries.