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Professional Summary

Fullstack Software Engineer with strong problem-solving skills and experience delivering automation and web-based solutions across industrial and tech environments. Proven success in building internal tools, optimizing logistics systems, and designing scalable fullstack applications using Python, Django, Elixir, React, and AWS. Passionate about clean architecture, data-driven decision-making, and efficient teamwork.

Professional Experience

ZF Group

Saltillo, Coahuila, Mexico

Software Engineer

May 2024 – Present

- Automated HR and CI tasks using Python, reducing completion time from days to minutes.
- Developed Power Apps for managing transportation, job descriptions, and food services.
- Created a Django-based census system, reducing processing time from 4 weeks to 3 days.
- Built a route optimization tool using Python and the Google Maps API, saving \$6,000+/month and benefiting 200+ employees in Production and HR.

Cinvestav RONIHM

Saltillo, Coahuila, Mexico

Software Engineer

Jun 2023 – Nov 2024

- Architected and independently developed an end-to-end data analysis system for police cadet driving assessments, transitioning from a Tauri (Rust) desktop solution to a high-performance ReactJS and NestJS system on AWS Cloud.
- Developed comprehensive post-test analysis and visualization tools for vital metrics (stress, heart rate, acceleration), enabling detailed assessments of driving performance.
- Streamlined decision-making for cadet training through data-driven insights and performance evaluations.

Justia

Mountain View, CA, USA

Web Services Intern

Oct 2023 – Apr 2024

- Developed automation scripts with Python, reducing processing time from 2 weeks to 2 days.
- Led the on-site server to AWS migration of client websites with zero downtime.
- Enhanced SEO performance through technical improvements using Python and TypeScript tools.

Cinvestav RONIHM

Saltillo, Coahuila, Mexico

Research Intern

Jun 2022 – Aug 2022

- Developed a computer vision system using OpenCV optical flow and neural networks (C/C++ and Python) that enabled quadrotors to detect and autonomously correct positional drift.
- Achieved stable flight patterns through real-time position correction algorithms, significantly improving navigation accuracy.

Ilumps

Chihuahua, Chihuahua, Mexico

Software Engineering Intern

Jan 2021 – Jan 2023

- **Zaturna:** Developed dashboards and calendar tools for a B2C event app using TypeScript.
- **Vesvir:** Built AR overlay with TensorFlow and migrated to Java + AR Foundation.
- **Medical Imaging System:** Implemented file storage on AWS S3 and the authentication module using ReactJS.
- **Nexum:** QA-tested with Playwright and enhanced e-signature modules in React + Firebase.

Education

B.S. in Computer Systems Engineering

Instituto Tecnológico de Saltillo (ITS), Saltillo, Coahuila, Mexico

2019 – 2024

Leadership and Extracurriculars

Innovation Coordinator – Innovation and Development Chapter

2019 – 2022

- Led 10+ student leaders in organizing workshops and hackathons impacting 300+ students.

VEX Robotics – Lead Programmer

2018 – 2019

- Led development team for two state-championship winning robots
- Architected and implemented autonomous navigation systems in C/C++

Achievements

- 1st Place – Daimler Truck Hackathon 2024
- Top 100 – ICPC Mexico National Finals 2024 (500+ teams)
- 2nd Place – TECNM ITS Programming Contest 2023

Projects

Cosmos – Rust-based headless CMS.

AtomDB – Embedded database in C/Rust inspired by SQLite.

Avgi – Web platform to help students explore universities and careers by providing open-source content. Aims to reduce student dropout rates.

Lade – Logistics and transportation ERP to trace material requests using Google Maps API and Elixir for high-demand server operations.

Technical Skills

Languages: Python, C/C++, Rust, Java, JavaScript, TypeScript, SQL, Golang, LaTeX, Elixir

Frameworks: Django, FastAPI, NestJS, Express, React, NextJS, NodeJS, Tauri, Phoenix

DevOps/Cloud: AWS, Docker, Firebase, Terraform, Linux, Bash

Databases: PostgreSQL, MongoDB, Redis

Tools: Git, Power Apps, Power BI, Swagger, REST, GraphQL, JWT, Playwright

Core Strengths

Problem Solving, Clean Code, Software Architecture, Collaboration, Time Management, Attention to Detail, English – C1 Proficiency