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WORKING EXPERIENCE

ZF - Software Engineer Intern (Saltillo, Coah, MX) May 2024 – Present

- Transformed HR and Continuous Improvement processes by developing Python automation tools, reducing task completion time from several days to just minutes.
- Created Power apps for managing Transportation, Job Descriptions and Food Service Review improving UX.
- Created a census application to digitize employee data collection, automating uploads and reducing processing time from 2 weeks to 3 days.
- Built a Python application to track and optimize Bus routes, reducing costs by eliminating redundant routes and saving 100,000.00\$ MXN per month.

Justia - Web Service Intern (Mt View, CA, US) Oct 2023 – Apr 2024

- Dynamic Helpdesk professional excelling in WordPress and CMS platforms.
- Automated coding, optimization and downloading processes to add thousands of pages of content to sites and reduce turnaround times from 1 – 2 weeks to 2 days.
- Set up an automated process for the complete migration of sites from a physical server to the AWS Cloud.

Cinvestav RONIHM - Software Research Engineer (Saltillo, Coah, MX) Jun 2023 – Nov 2024

- Built an advanced system for analyzing and visualizing stress, heart rate, acceleration, etc., in police cadets, transitioning from Tauri (Rust) Desktop to a high-performance ReactJS and NestJS solution in AWS Cloud.

Cinvestav RONIHM - Research Intern (Saltillo, Coah, MX) Jun 2022 - Aug 2022

- Developed and implemented a vision system using OpenCV optical flow and a neural network (C/C++ and Python) to predict and rectify drifting issues in quadrotors.

Ilumps - Software Engineering Intern (Chihuahua, Cuu, MX) Jan 2021 - Jan 2023

- Vesvir** (*AR/VR Web Prototype*): Contributed to an AR/VR feature for a clothing e-commerce, enabling virtual try-ons by integrating 3D models with TensorFlow and OpenCV, and optimizing the app with a migration to ReactJS and ARKit full-body detection for iOS.
- Zaturna** (*B2C web app for Events*): Strategic B2C events designer, crafting intuitive interfaces, streamlining supplier interactions, and optimizing registration processes. Engineered a calendar system for efficient event organization.

EDUCATION / CONTESTS

Computer Systems Engineering - Instituto Tecnológico de Saltillo (Saltillo, COAH) Aug 2019 – Dec 2024

- Part of the student council of computer systems engineering.
- First Place Winner team on the Daimler Truck Hackathon 2024
- First Place Winner team on the International Collegiate Programming Contest in TECNM ITS
- Second place winner of the 2023 programming contest in TECNM ITS
- Top 100 winner team on the ICPC MX National Finals 2024

High School, Robotics Vex Team 2018 – 2019

- Served as Chief Programmer for two state-winning high school teams in the VEX Robotics competition, designing and implementing the entire codebase in C and C++ to drive autonomous and manual robot operations.

PROJECTS

Cosmos: Open-source headless CMS self-hosted build 100% on Rust.

AtomDB: Developed an embedded database system inspired by SQLite in C/Rust, implementing features such as table management, data insertion, and querying. Applied advanced concepts in data structures, file handling, and optimization.

Arqontact: Web App to help architects find reliable suppliers of materials or services easily with an architects/supplier's directory and with a project organization tool to design/schedule all the work to do in an architectural work.

Avgi: Web application to provide high school and college students with information about their universities, careers, and subjects to reduce dropout rates and create student communities.

TECHNICAL AND SOFT SKILLS

Soft Skills: English (C1) | Interpersonal, Leadership, Time management, Teamwork and Problem-Solving skills | Decision. Making | Autodidact | Attention to detail

Languages: Python | C/C++ | TypeScript | JavaScript | Rust | Java | SQL | JSON | Golang

Tools: REST | Tailwind | Swagger | MongoDB | PostgreSQL | Power Apps | Power BI | Git | GraphQL | JWT

DevOps tools: Docker | AWS (S3, EC2, RDS) | Firebase (Hosting, Database, Auth, Storage)

Frameworks: ReactJS | Fast Api | NestJS | ExpressJS | NodeJS | NextJS | Tauri | Spring Boots