

# Diego Antonio López Martínez

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## Professional Summary

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Cloud and Platform Engineer specializing in building scalable internal platforms and cloud governance solutions on AWS. Experienced in designing distributed, serverless architectures across multi-account environments, processing large-scale workloads with high efficiency and reliability. Strong expertise in Terraform, cloud automation and backend development with Python and Golang, delivering end-to-end systems that transform complex cloud data into actionable insights for engineering teams and executive leadership. Passionate about platform engineering, developer experience, and FinOps, with a focus on building cost-aware, scalable systems that drive efficiency and informed decision-making.

## Professional Experience

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### Southwest Airlines

Dallas, Texas, USA

Cloud Engineer

Sep 2025 – present

- Designed and delivered a cloud governance and observability platform to identify AWS Lambda functions requiring attention on deprecated runtimes, enabling organization-wide visibility and decision-making.
- Architected a distributed serverless data platform processing 250,000+ Lambda functions across 1,000+ AWS accounts, 5 regions, and multiple environments, completing analysis in under 4 minutes through multi-threaded collection strategies.
- Built an end-to-end event-driven data pipeline using AWS Lambda, S3, API Gateway, OpenSearch, and Terraform, enabling scalable and automated data processing.
- Implemented data enrichment workflows to map resources to organizational hierarchy, transforming technical cloud data into business-level insights for executive stakeholders.
- Developed RESTful APIs and a React + TypeScript dashboard to deliver KPIs, historical trends, and prioritized insights to both engineering teams and non-technical leadership.
- Designed and implemented cloud networking automation using AWS IPAM, Terraform, and Python (Boto3), standardizing CIDR allocation and enabling centralized governance across multi-account environments.
- Improved cloud cost visibility and operational efficiency by enforcing resource tagging, traceability, and self-service infrastructure workflows aligned with FinOps practices.

### Numaris

Cuernavaca, Morelos, Mexico

Software Engineer

Jun 2025 – Sep 2025

- Developed a cross-platform React Native app to securely control Teltonika FMC130 units via Bluetooth, replacing physical iButtons in 200K+ vehicles and reducing hardware costs at scale.
- Implemented secure user authentication and multi-factor access using AWS Cognito, ensuring reliable identity management across all mobile clients.
- Integrated with Zoho to automate user account workflows via Lambda functions, improving operational response time, and support scalability.

### ZF Group

Saltillo, Coahuila, Mexico

Software Engineer Jr

May 2024 – Feb 2025

- Built a route optimization tool using Python and the Google Maps API, saving \$6,000+/month and benefiting 200+ employees in Production and HR.
- 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 the processing time from 4 weeks to 2 hours.

### Cinvestav RONIHM

Saltillo, Coahuila, Mexico

Software Engineer

Jun 2023 – Dec 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**

*Saltillo, Coahuila, Mexico*

*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.

### **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 Jr*

*Jan 2021 – Jan 2023*

- **Vesvir:** Built an AR overlay with TensorFlow and migrated to the Java + AR Foundation.
- **Medical Imaging System:** Implemented file storage on AWS S3 and the authentication module using ReactJS.

## **Education**

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### **B.S. in Computer Systems Engineering**

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

*2019-2024*

## **Leadership and Extracurriculars**

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### **AWS Students Community Day – Speaker**

- Delivered a talk on FinOps and serverless architectures, demonstrating how to design cloud applications with up to 200x cost savings compared to traditional infrastructure.

### **AWS User Group Saltillo – Speaker**

- Delivered a technical talk on *Computer Vision in the Cloud*, demonstrating real-time image analysis using AWS services.

### **Competitive Programming Club – Co-Founder and Team Lead**

- Founded and lead the Competitive Programming Club at Tecnológico de Saltillo.
- Mentor and train students for algorithmic challenges, national contests, and technical interviews, fostering a collaborative learning culture.

### **VEX Robotics – Lead Programmer**

*2018 – 2019*

- Led the development team for two state-championship-winner robots.
- Designed and implemented autonomous navigation systems in C/C++.

## **Achievements**

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

## **Projects**

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**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.

**Nimbus** – Real-time air quality monitoring platform that integrates NASA TEMPO satellite data with a serverless Data Lake architecture in AWS.

## Technical Skills

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

**Cloud & DevOps:** AWS (Lambda, S3, API Gateway, DynamoDB, OpenSearch, EventBridge, CloudWatch, IAM), Terraform, Docker, Kubernetes (EKS), CI/CD, Linux, Bash, Infrastructure as Code

**Cloud Architecture:** Serverless, Distributed Systems, Event-Driven Architecture, Multi-Account Architectures, Cloud Networking (VPC, CIDR, IPAM)

**Databases:** PostgreSQL, DynamoDB, MongoDB, Redis, Supabase

**Observability & Monitoring:** CloudWatch, Logging, Metrics, Tracing, Grafana

**Frameworks:** FastAPI, ReactJS, NestJS, Express, NextJS, Node.js, Phoenix, Tauri

**Tools:** Git, Swagger, REST APIs, GraphQL, JWT, Playwright, Boto3, Power BI

## Core Strengths

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**Execution:** Ownership & End-to-End Delivery, Problem Solving, Attention to Detail

**Collaboration:** Cross-Functional Work, Technical Communication (Engineering & Leadership)

**Thinking:** Platform Mindset, Decision-Making with Business Impact, Adaptability

**Languages:** English – C1 Proficiency