ALEXIS HORACIO LÓPEZ FRAGOSO

Telecommunication, Systems and Electronic Engineer

(+52) 44 3268 5979 guados123@gmail.com Mexico City - Miguel Hidalgo

SKILLS

| Python | JavaScript | TypeScript | Angular | Git | SQL | NoSQL | Clean Code | Software Architecture Principles

WORK HISTORY

Maosa (Morelia, Michoacán) **Data Platform Engineer** *Jan 2026 – Current*

Tech Stack*: Python: FastAPI, Pandas/polars. GCP ETL design: Composer and Workflows.* Google Cloud Platform (Bigquery, Firestore, CloudSQL). React, Next.js, Nginx. Auth0. PostgreSQL.

• Developed an executive sales analytics platform, using **React 19**, **ECharts**, and Google Maps API for interactive visualization, with **FastAPI**, **Polars**, **Redis**, and **BigQuery** powering high-performance data processing and reporting.

• Designed and built a business process management system based on a Hub-and-Spoke microservices architecture, integrated with **Auth0** IAM for secure authentication and authorization.

• Developed a fuel pricing system for imported and PEMEX products, supporting 1,000+ fuel stations (PostgreSQL, FastAPI, **ORM** sqlalchemy)

• Managed the company's cloud infrastructure, including system architecture design, database modeling, and deployment strategy across multiple solutions.

• Ensured software quality and security through **SAST**, **DAST, test matrices**, and **unit testing** across all delivered systems.

Data intelligence (Miguel Hidalgo, CDMX) **Data Engineer** Feb 2025 – Jan 2026

Tech Stack: Apache Spark, Apache Beam, Apache Airflow, Google Cloud Platform (Dataproc, Dataflow, Cloud Storage, **Firestore**, **BigQuery**, Cloud Run, Cloud Functions), Python, FastAPI, Angular, LookerML.

• Developed and maintained a business-critical web application used by 50,000+ employees, leveraging **Angular** (frontend) and Python (**FastAPI** backend).

• Performed data analysis and dashboarding using **LookerML**, enabling business and operational insights

• Designed and built analytics and reporting modules for an electronic invoicing platform supporting an international supply chain client, using a BFF architecture with **jQuery**, FastAPI, and Jinja.

• Built and optimized a large-scale ETL pipeline for payroll invoicing, processing approximately 49 million records using Apache **Spark** on Google **Dataproc**.

• Designed and implemented an invoice reconciliation ETL pipeline (incoming and outgoing invoices) following a RAW / Bronze / Silver / Gold (Medallion) architecture, using Spark, Apache Beam, and Apache **Airflow**

• Developed a high-volume CFDI stamping system for multiple enterprise clients, integrating SFTP-based ingestion and applying the Strategy design pattern to handle client-specific data formats, using Python (FastAPI, **lxml**) and C# for **XSLT** processing.

• Developed a self-invoicing web portal for a large textile company, using FastAPI and **Jinja**.

• Implemented application performance monitoring (APM) and application security practices, including **SAST** and **DAST**, across all systems.

Engineering tutor **Independiente** Jul 2022 – Feb 2024

• Provide consultations on signal amplification, sampled data systems, and analog systems.

• I focused on implementing study techniques for my mentees in order to facilitate their learning.

Education

Telecommunications, Systems and Electronics Engineering - **UNAM** 2020 – 2024

Graphic Design (Técnico) — **Instituto de Compuinglés de Oriente** 2016 – 2018

Certifications

CS50's Introduction to Artificial Intelligence with Python **HarvardX**

Machine Learning with Python: from Linear Models to Deep Learning **MITx**

Verilog for an FPGA Engineer with Xilinx Vivado Design Suite **Kumar Khandagle Course**

Languages

English – Advanced

Russian – Basic

Spanish – Native

Project Portfolio: **https://github.com/yoyusD/My-Project-Portfolio**