

# JACOBO MATEO BEDOYA OQUENDO

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Backend developer since 2016 with a Mechanical Engineering background and a Master's in Automation & Industrial Control. Specialized in building high-performance real-time systems with Python and Go. Experience spans IoT data pipelines, distributed storage systems, real estate analysis engines, and industrial monitoring platforms.

## PUBLIC PROJECTS:

**JaDFS** (23/11/2025 - present)

A distributed file storage system in Go, progressing from a simple file server to a fully distributed, fault-tolerant storage system.

[view code](#)

**JaTorchC** (05/01/2026 - present)

A learning project to deeply understand machine learning fundamentals by recreating PyTorch from scratch in C, with plans for a Python interface.

[view code](#)

## CORE TECHNOLOGIES:

### Programming Languages

- Python (Advanced)
- Go (Intermediate)
- C (Basic)

### Databases

- Relational:  
MySQL, PostgreSQL, SQLite
- Non Relational:  
MongoDB

### Applied Architecture & Patterns

- Architectural:  
Event-Driven, Publisher-Subscriber, Client-Server, Master-Slave, Peer-to-Peer
- Design Patterns:  
Decorator, Plugin, Facade, Observer

## **Cloud & Infrastructure**

- AWS (S3, Lambda, VPS, Elastic Beanstalk)
- gCloud (Bucket Storage, CloudRun, CloudApp, VPS, BigQuery)
- Azure (Blob Storage)
- Docker, Docker-compose, Docker-Swarm

## **WORK EXPERIENCE:**

### **EarthFuneral**

#### **Senior Backend Developer** (*March 2025 - December 2025*)

Developed and maintained the platform's backend using Django, adding new features and improving overall stability.

- Developed and maintained a Django backend with a real-time pipeline using MQTT, WebSockets, Redis, and Celery to process high-volume sensor data.
- Implemented a PostgreSQL/TimescaleDB multi-database architecture and automated MQTT-based alert system with Celery task execution and WebSocket notifications.
- Improved performance through query optimization, indexing, and Redis caching.

### **Endava**

#### **Senior Developer** (*August 2022 – December 2024*)

#### **Math Engine (Real Estate Loan Analysis)**

- Developed a loan sizing and investment analysis engine; implemented JSON-based automated test generation and binary search optimization for maximum loan and minimum NOI calculations.
- Contributed to the open-source Go version of the package.

#### **Point Cloud (Desktop Annotation Tool)**

- Led event-driven architecture for compute-heavy features using multiprocessing and memory optimizations.
- Automated blueprint generation via a local server reacting to point cloud annotations.
- Built a thread-safe facade over the BOX Cloud SDK for file management and uploads.

## **Sophos Solutions**

### **Solutions Developer II** (*April 2022 – July 2022*)

Continue the development and scaling of a mine monitoring platform to mitigate geological risk.

## **ActiveOne**

### **Development Analyst** (*April 2021 - March 2022*)

- Developed and maintained a web platform for uploading and classifying scanned proceedings using AWS AI services.
- Built a streaming tool to transfer files between AWS and Azure storage.
- Implemented a logging framework using a base metaclass and decorators for cross-application function tracking.

## **LUJACOL SAS**

### **Owner** (*March 2020 - October 2022*)

- Founded and operated a logistics company, building a web portal for client order management, shipping tracking, and merchandise documentation.
- Automated client communications with email reminders and notifications, keeping operations lean with minimal headcount.

## **Institución Universitaria ITM**

### **Data Analyst** (*October 2016 - January 2021*)

- Built a web portal to monitor scholarship recipients, generating early alerts for low academic performance and dropout risk to trigger welfare department intervention.
- Developed a metric to measure the university's academic impact on students across performance tiers.

## **EDUCATION**

Master in Automation and Industrial Control (Coursework completed) - ITM  
Mechanical Engineer - Universidad Pontificia Bolivariana