

# Christopher Maldonado

DATA ENGINEER

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## Summary

Data Engineer specialized in Python, with experience in data analysis. Passionate about designing and developing solutions, combining innovation and efficiency to solve complex problems, optimize processes, and improve decision-making through data insights.

## Experience

### GEPP | PepsiCo Bottling Mexico

Escobedo, NL

DATA ANALYST

August 2023 – April 2025

- Managed and consolidated over **5 million operational records**, reducing analysis time of key indicators by **30%**.
- Developed **predictive mathematical models** with **Python** to optimize shift planning and reduce operational risks by **25%**.
- Automated dashboards and executive reports with **Power BI**, cutting delivery time to management by **40%**.
- Collaborated on cross-functional projects with Production, Logistics, and HR to implement data-driven solutions that improved operational efficiency.

### EMSA | Multiservices

Juárez, NL

DATABASE ADMINISTRATOR

August 2020 – July 2023

- Managed and optimized **SQL Server databases**, reducing query response times for critical operations.
- Automated **inventory and logistics processes** with advanced **Excel**, reducing manual errors by **70%**.
- Designed and implemented **ETL pipelines** to integrate and transform data from multiple departments, ensuring quality and traceability.
- Generated strategic reports with **Power BI** for sales, profitability, and product turnover analysis, improving business decision-making.

## Technical Skills

### Python

EXPERIENCE

- Data manipulation and analysis with **Pandas** and visualization using **Matplotlib**.
- Automation of data workflows and dynamic reports using **Python** and **Airflow**.
- Project containerization with **Docker** and efficient deployments using **Kubernetes**.
- Version control and CI/CD workflows with **Git**, **GitHub Actions**, and **GitLab CI**.
- Data testing and validation using **PyTest**.

### Databases

EXPERIENCE

- Relational database management: **PostgreSQL**, **SQL Server**, schema design, and optimized queries.
- Development of **ETL** processes and data integration with **Apache Spark** and **Kafka**.
- Basic use of **AWS** services such as **S3**, **Redshift**, **Lambda**, and **EC2**.

## Projects

### Traffic Accident Monitoring for Insurance Policy Adjustment

GITHUB

- Developed an **ETL pipeline** in Python to process over 1 million daily accident records in New York from a public API.
- Automated the data workflow using **Apache Airflow** with **PythonOperator**, ensuring daily execution without manual intervention.
- Performed data cleaning, transformation, and validation with **Pandas**, and loaded it into a **PostgreSQL** database.
- Built interactive dashboards in **Power BI** for risk analysis by date, location, and vehicle type.
- Containerized the full project using **Docker Compose**, enabling environment portability and replication.

## Education

### Universidad Autónoma de Nuevo León

Nuevo León, Mexico

BACHELOR'S DEGREE IN PHYSICS

2020–2024

- Training** in **mathematical models**, **advanced probability**, **calculus**, and **algorithms**.
- Skills acquired**: Problem solving, **data analysis**, and algorithm development applied to physical phenomena.
- Relevant projects**: Application of mathematical and physical principles in practical projects and data-driven analysis.