Juan David Otálora

ML ENGINEER - DATA SCIENTIST

I'm a machine learning engineer and data scientist with an education in mathematical engineering and economics, interested in the application of mathematical and statistical models for solving real-life problems. I have experience working as a data scientist with financial models and as a consultant for the banking industry. I'm very curious and responsible, always wanting to see the world in new ways and try different tools to solve problems. I have been trained to approach problem-solving in a systematic and organized way, applying quantitative models to advise companies to make better decisions.

💼 WORK EXPERIENCE

ML Engineer

Nov 2023 - January 2024 / Casa Museo El Santuario (El Santuario, COL)

- Developed a Chatbot based on AI that centralized the information of the institution and the history of the town of El Santuario in Colombia.
- Collected information from the town's history and administrative procedures to create a database for the institution.

TECH-STACK: Python, HuggingFace, OpenAI, Streamlit

Backend Software Developer

Nov - Dic 2022 / Techstars (Miami, USA remote)

- Developed a centralized web app for Techstars, streamlining client data and contact search.
- Design and implement a database for the clients to improve the data flow of the company saving 80% of the time.

TECH-STACK: React, FastAPI, MySQL, Pandas, NodeJS, SQLAlchemy

Data Scientist

Mar 2020 - Apr 2022 / Dataknow (Medellín, COL)

- Developed clustering models for client segmentation using RFM, and DBSCAN models for a cosmetics company as a consulting project to have a better understanding of their clients and adjust their marketing campaign.
- Worked for the Colombian bank Davivienda in the IFRS9 financial area to support and develop the data ETL to feed the risk models. I also supported the development of the rules for the categorization of risk clients.
- Due to a partnership with the Colombian bank Bancolombia in the client's quality center, I developed ETLs for the data flow of this area. I worked with high-volume data.
- Designed PowerBI dashboards for a Saas initiative that allowed companies to observe their clients in a segmented optic and keep track of their most KPIs.

TECH-STACK: SAS MIP, SAS Data Integration, SAS Guide, Hadoop, Impala, SQL, Excel, PowerBI

EDUCATION

- January 2015 – December 2019
  B.Sc. Mathematical Engineering
  EAFIT University

- July 2013 – August 2019
  B.Sc. Economics
  EAFIT University

- June 2022 – February 2023
  Software Development Bootcamp
  Holberton School

- March 2023 – December 2023
  ML Bootcamp Specialization
  Holberton School

CONTACT

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COURSES

SAS Programming Complete; Learn SAS and Become a Data Ninja
Coursera (2020)

Machine Learning and Data Science with Python
Coursera (2020)

SKILLS

- FastAPI, Flask
- Keras, Tensorflow, Pytorch
- SQL - NoSQL (MongoDB)
- PowerBI, Matplotlib, Seaborn
- SAS DI, SAS MIP, SAS Guide, Pyspark, Pandas
- Python, R, C, JavaScript, Matlab
- MLOps: Databricks, Mlflow
- HuggingFace, OpenAI API

LANGUAGES

English · C1
French · A2

Data Analyst Intern

Jan - Jun 2018 / Protección (Medellín, COL)

- Supported and maintained the quantitative models for the analysis of the portfolios of the investment area.
- Implemented the translation of the automation tasks for rebalancing and updating the data of the portfolios from Visual Basic to modern programming languages (R and Python).
- Developed and maintained an R Shiny app for the econometrics models of the specialists, as the internship final project.

TECH-STACK: Visual Basic, Excel, R, Python, R Shiny

PROJECTS

Application for Visualization and Filtering of Investors and Connections for Techstars

- Built for Techstars startup users, our project simplifies investor filtering from Pitchbook's database using Affinity for connections. Deployed with a MySql database and FastAPI API, the React frontend facilitates data display and filtering.

TECH-STACK: React, FastAPI, MySQL, Pandas, NodeJS, SQLAlchemy

RAG System for Question Answering for The House Museum El Santuario

- Implemented a Retrieval Augmented Generation (RAG) system, utilizing Mistral-7B, chatgpt3.5 turbo, Bard as Large Language Models (LLM), and all-MiniLM-L6-v2, and all-mpnet-base-v2 for knowledge embedding. The system efficiently extracts and segments data, enhancing responses by optimizing user queries through prompt augmentation.

TECH-STACK: Python, HuggingFace, OpenAI, Streamlit

AirBnb Clone

- In this project, I cloned the system of AirBnB. I created a console to interact with the creation, update, posting, and deletion of objects like users, locations, etc. I also created an API to communicate with the frontend.

TECH-STACK: Python, HTML, CSS, MySQL, JavaScript

Simple Shell

- A command line interpreter, or shell, in the tradition of the first Unix shell written by Ken Thompson in 1971. This shell is intentionally minimalistic, yet includes the basic functionality of a traditional Unix-like command line user interface.

TECH-STACK: C, Bash