

# Danillo Barros

Data Scientist / Data Analyst / Machine Learning Engineer

**Location:** Maceió, Alagoas, Brazil | **Phone:** +55 82 998298549 | **Email:** [danillo\\_barros@live.com](mailto:danillo_barros@live.com)  
**LinkedIn:** <https://www.linkedin.com/in/danillo-cordeiro/> | **Portfolio:** [danillobarroscordeiro.github.io](https://danillobarroscordeiro.github.io)

## SUMMARY

Data Analyst and Data Scientist with 4 years of experience helping companies increase its revenue, decreasing its costs or improving its processes applying a data-driven approach and machine learning models. Proficient in leveraging key tools such as SQL and Python to find actionable insights that drives stakeholders in business decisions. Skilled in design and deploy deep learning and machine learning models in AWS. One of the main results achieved was increasing the tax collection of the Alagoas State Treasury Department over U\$8 million.

## SKILLS

**Proficient:** Python, SQL, Machine Learning and Deep Learning, Statistical Modelling, Dedicated, Goal-Oriented, Autonomous, AWS, NLP, Scikit-Learn, Spacy, Adaptability, Critical Thinking

**Intermediate:** Power BI, Excel, Streamlit, Gradio, Spacy, Flask, Linux, Git, Docker, Topic Modelling, price elasticity of demand, Keras, TensorFlow, Leadership

**Beginner:** Flask, Tableau, Airflow

## PROFESSIONAL EXPERIENCE

### Data Analyst / Data Scientist

Alagoas State Treasury Department

May/2021 – Present

#### Core Responsibilities:

- Enhanced reports and dashboards with Python, SQL, and Excel to accurately calculate tax liabilities for large corporations receiving tax breaks, boosting tax collection by over U\$5 million
- Designed a Python and SQL script to update aggregate margins for various products, enhancing tax base computations and resulting in a tax collection increase of over U\$7 million (more than 10% per year).
- Implemented a statistical methodology applying R and SQL to establish a new tax base for gasoline, diesel oil, kerosene, and ethanol, based on consumer selling prices at gas stations, resulting in at least a 20% increase in tax collection for these products.
- Developed a monitoring script applying Python, SQL and Excel to track tax evasion by companies purchasing wheat flour, recovering approximately U\$3 million in unpaid taxes to date.
- Conducted studies and proposed statistical methodology to reduce tax breaks of the wheat sector, increasing annual tax revenue by up to U\$15 million (more than 20% per year)

**Key Technologies and Tools:** Python, Oracle SQL, R, Excel, Statistical Modelling, Goal-Oriented, Autonomous, Pandas, Numpy, Scipy, Critical Thinking, Communication, Decision-Making, Adaptability

### Business Intelligence Manager

Alagoas State Treasury Department

Dec/2020 to May/2021

#### Core Responsibilities:

- Led a team in developing an Oracle OBIEE data mart and dashboard to identify discrepancies in companies' tax returns, leading to over U\$3 million in tax notifications, and collections.
- Managed the creation of an Oracle OBIEE data mart focused on company tax debts, resulting in a significant reduction of over 100% in the time required for tax debt calculations.

**Key Technologies and Tools:** OBIEE, Oracle SQL, Leadership, Excel, Communication, Organization, Teamwork

## PROJECTS

- Engineered and deployed an AWS-based model using NLP and BERTopic to summarize negative reviews of electronic products on Amazon. Developed a Gradio web API, enabling stakeholders to access topic words by product ID, thereby reducing review checking time by more than 100%. This project adhered to MLOps best practices.

**Key Technologies and Tools:** AWS ECR, AWS ECS, AWS Athena, AWS Glue, AWS S3, AWS Sagemaker, NLP, Gradio, API, Deep Learning, Transformer, Topic Modelling, MLOps, Python, SQL, Docker

- Developed a predictive model for the price elasticity of demand for laptops, enabling the establishment of optimal pricing strategies to maximize revenue. Price elasticity predictions are accessible via a custom Streamlit app. Simulations made resulted in a 65.87% increase in product revenue.

**Key Technologies and Tools:** Streamlit, Price elasticity, API, Regression models, Python

- Created a comprehensive Power BI report featuring various dashboards for detailed analysis of products, customers, reviews, payments, and orders.

**Key Technologies and Tools:** Power BI

- Engineered and deployed an end-to-end classification model in AWS to predict which SARS virus a patient caught. Implemented a Streamlit web API for streamlined patient data entry, utilizing MLOps practices to automate the project workflow. It could increase diagnostic precision by at least 10%

**Key Technologies and Tools:** AWS Sagemaker, Docker, AWS S3, AWS Athena, AWS Glue, AWS ECR, AWS ECS, Classification models, Streamlit, MLOps, XGBoost, API, Python, Scikit-Learn

- Designed clusterization machine learning model in Python and Metabase dashboard hosted on AWS EC2 server to identify valuable customers for a successful loyalty program, ultimately boosting revenue by at least 15% in simulations.

**Key Technologies and Tools:** AWS, Metabase, Clusterization Models, RFM model, Python, Scikit-Learn

- Applied classification machine learning model in Python to assess clients' interest in car insurance (propensity score) and deployed it on an AWS cloud server (EC2) with results accessible via Google sheets. The model decreased the cost and time of contacting customers by at least more than 40%.

**Key Technologies and Tools:** AWS EC2, Google Sheet, Propensity score, learning to ranking models, API, Python, Scikit-Learn

- Applied a regression machine learning model on AWS EC2 with Telegram access for predicting store sales over the next 6 weeks, enabling accurate cash flow planning and store improvements.

**Key Technologies and Tools:** AWS EC2, Regression models, Scikit-Learn, Python

- Utilized a Multi-Armed Bandit (MAB) bayesian reinforcement machine learning model to compare website sign-up button versions, potentially increasing the conversion rate in at least 10%.

**Key Technologies and Tools:** Python, Hypothesis testing, A/B testing

- Created a dashboard using Python and Streamlit, pinpointing best properties for purchase and upgrade, leading to increased profits.

**Key Technologies and Tools:** Python, Streamlit

## **EDUCATION**

### **B. Sc. Statistics**

Paraíba State University

Ago/2012 to Jun/2017

- **Bachelor Thesis: Generalized Linear Model for right skewed data**

### **B. Sc. Statistics**

San Diego State University - California State University (U.S.)

Ago/2012 to May/2015

- **Took Master's degree courses in Advanced Probability and Design of Experiments.**

## **LANGUAGES**

**Portuguese: Native**

**English: Advanced**