Mariana Vivas

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WORK EXPERIENCE

Integra International Services — Remote
Data Scientist — Feb 2023 - Present

- Formulate and sustain tax risk and default prediction models for municipal management in San Salvador.
- Perform in-depth analysis of real estate tax rates using models to uncover anomalies or fraud.
- Apply data mining and machine learning for comprehensive large-scale data analysis and insights.

Henry — Remote
Teaching Assistant for Data Science — Oct 2022 - Jan 2023

- Coordinated 15 students to help during their time in the course.
- Achieved a successful completion of the course for 74% of the students by helping solve programming exercises.
- Reached the integration of 80% of the students using group integration techniques.

PROJECTS

Seismic alert system — Nov 2022 - Dec 2022

Unified the seismic data from 3 countries into a relational database and developed an unsupervised machine learning clustering model to predict the threat level of earthquakes, improving data accessibility and analysis for 126.7 million people and enhancing the effectiveness of the seismic alert system.
Tools: Python, scikit-learn, pandas, numpy, matplotlib, seaborn, geopy, streamlit, AWS, airflow, docker, GitHub.

Search for new physics using machine learning techniques in multi-jet events — Jan 2021 - Oct 2022

Benchmarked 8 machine learning models for their use in anomaly detection in Physics and conducted a thorough investigation into their reproducibility in the field and developed a Python package for managing simulated data from LHC collisions, increasing accessibility and facilitating future research by streamlining data management.
Tools: Python, scikit-learn, pandas, tensorflow, matplotlib, seaborn, jupyter notebook, jupyter book, GitHub.

ETL with Python and MySQL — Nov. 2022 - 1 week

Created a data pipeline that efficiently cleaned, transformed, and ingested data in 4 different formats into a well-structured relational database using MySQL, enhancing data organization and facilitating analysis.
Tools: Python, pandas, SQL, sqlalchemy, matplotlib, seaborn, jupyter notebooks, GitHub.

EDUCATION

Henry — Remote
Data Science Bootcamp. — Aug 2022 - Dec 2022

Central University of Venezuela — Caracas, Venezuela
Bachelor's Degree in Physics, *Cum Laude* (GPA: 3.5) — Oct 2015 - Dec 2022

VOLUNTEERING EXPERIENCE

The Turing Way — Remote
Book Dash Participant — May 2021

- Successfully added a chapter to a book, improving the reading experience for an estimated 9500 users/month.
- Contributed to a team effort in writing a comprehensive chapter, *The Guide for Project Design*: Overview of Project Design, which covered 5 key aspects of project design.

CERTIFICATIONS

- **Certifications**: Data Scientist from Henry; Neo4j Graph Data Science

LANGUAGES

English Proeficient | **Spanish** Native | **French** Basic