Mariana Vivas

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Summary

As a physicist in data science, I am able to understand complex data using my knowledge in mathematics and modeling. My final degree project honed my skills in using machine learning and data engineering techniques to make valuable discoveries. I am eager to apply my expertise to make a positive impact using data.

Education

Henry Remote
Data Science Bootcamp. Aug 2022 - Dec 2022
Central University of Venezuela Caracas, Venezuela
Bachelor's Degree in Physics, *Cum Laude*. Oct 2015 - Dec 2022

Skills

Python Data manipulation, cleaning, and transformation using pandas and numpy. Data visualization and analysis using matplotlib and seaborn. Machine learning using TensorFlow and scikit-learn.

MySQL Experience in creating and normalizing relational databases, cleaning and optimizing performance, and writing complex queries for data extraction and manipulation. Skilled with MySQL Workbench.

Other skills and tools: Docker, PowerBI, Jupyter Notebooks, Latex, Markdown, Anaconda, GitHub, Linux.

Projects

Seismic alert system Nov 2022 - Dec 2022
Developed a database of seismic data from multiple countries and created an unsupervised machine learning model for threat level clustering and for a seismic alert system, improving data accessibility and analysis.

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 machine learning anomaly detection models in the search for new physics and investigated the reproducibility of these techniques for high-energy physics. Developed a python package for managing simulated data from LHC collisions, making the work accessible for future research.

Tools: Python, scikit-learn, pandas, tensorflow, matplotlib, seaborn, jupyter notebook, jupyter book, GitHub.

Work Experience

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

- Coordinated a group of 15 students to help during their time in the course.
- Achieved a successful completion of the course for 74% of the students and the integration amongst the group.
- Used group-integration techniques and aid in the solution of programming exercises in python and MySQL.

Volunteering Experience

The Turing Way Remote
Book Dash Participant Oct 2022 - Jan 2023

- Found the opportunity to add a chapter in the book that would optimize the reading experience for the users.
- Worked collaboratively to write a chapter on *The Guide for Project Design*: Overview of Project Design.

Lenguages

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