Mariana **Vivas**

DATA SCIENTIST · PHYSICIST

Caracas, Venezuela

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Summary

Data scientist with background in physics. I entered the world of data science doing the final project of the degree using machine learning to search for new physics in simulated data of the LHC. Interested in machine learning, data engineering and open science. My professional goal is to work in an area where I can apply my knowledge to have a positive impact. Perseverance, adaptability, dedication and teamwork are my most valuable skills when facing a new project.

Work Experience

Data Science Teaching Assistant   *Remote*

HENRY   *Oct. 2022 - Present*

- Coordinate a group of students to achieve integration amongst the group and assist to solve exercises and propose ideas to improve the Bootcamp processes.

Book Dash Participant   *Remote*

THE TURING WAY   *May. 2021*

- Cowrote a chapter on the guide for project design: Overview of Project Design

Undergraduate Teaching Assistant   *Caracas, Venezuela*

CENTRAL UNIVERSITY OF VENEZUELA   *May. 2019 - May. 2020*

- Delivered practical lectures to the students for General Physics course and graded quizzes and homeworks.

Education

Data Science Bootcamp   *Remote*

HENRY   *Aug. 2022 - Dec. 2022*

B.S. in Physics, *Cum Laude*   *Caracas, Venezuela*

CENTRAL UNIVERSITY OF VENEZUELA   *Oct. 2015 - Dec. 2022*

- Mention: theoretical physics.

Projects

Seismic alert system   *Remote*

HENRY LABS: TEAM PROJECT   *Nov. 2022 - Dec. 2022*

- Development of a unified database automatically updated containing the seismic data from United States, Japan and Mexico.
- Use of an unsupervised machine learning model to group seism according to their threat level and to create a sesimic alert for Mexico with easy to understand lenguage.
- **Technical skills:** Python, scikit-learn, pandas, numpy, matplotlib, seaborn, geopy, streamlit, AWS, airflow, docker, jupyter notebook, GitHub.

Search for new physics using machine learning techniques in multi-jet events   *Caracas, Venezuela*

B.S. FINAL DEGREE PROJECT   *Jan. 2021 - Oct. 2022*

- Comparison of machine learning models participating in the LHC Olympics 2020 and studied reproducibility in the implementation of machine learning techniques in high energy physics.
- Developed a python package (link) to manage simulated data from collisions in the LHC.
- **Technical skills:** Python, scikit-learn, pandas, tensorflow, matplotlib, seaborn, jupyter notebook, jupyter book, GitHub.

Classification of real estate data   *Remote*

HENRY LABS: INDIVIDUAL PROJECT   *Nov. 2022 - 1 week*

- Implementation of machine learning models to classify real state from Colombia into the categories expensive or cheap.
- Data cleaning, normalization and feature extraction.
- Testing of multiple models and hiperparameter optimization.
- **Technical skills:** Python, pandas, numpy, scikit-learn, matplotlib, seaborn, geopy, jupyter notebooks, GitHub

Technical skills

Python ● **SQL** ● **Docker** ● **PowerBI** ● **Jupyter** ● **Git** ● **Latex**

Lenguages

English Proeficient ● **Spanish** Native ● **French** Basic