

# Mariana Vivas

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## EDUCATION

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### Henry

Data Science Bootcamp.

### Central University of Venezuela

Bachelor's Degree in Physics, *Cum Laude* (GPA: 3.5)

Remote

Aug 2022 - Dec 2022

Caracas, Venezuela

Oct 2015 - Dec 2022

## SKILLS

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**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, Neo4J, Jupyter Notebooks, Latex, Markdown, Anaconda, GitHub.

## PROJECTS

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### 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.

## WORK EXPERIENCE

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### Henry

Teaching Assistant for Data Science

Remote

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 in python and MySql and their understanding of tools such as PowerBI.
- Reached the integration of 80% of the students using group integration techniques.

## VOLUNTEERING EXPERIENCE

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### The Turing Way

Book Dash Participant

Remote

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.

## LANGUAGES

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