MATEO ECHEVERRY HOYOS

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I'm a Computer Engineer student at the University Polytechnic of Madrid, I'm currently enrolled as an exchange student at the Swiss Federal Institute of Technology Lausanne for a year to finish my bachelor's taking courses from the Data Science master's. I consider myself a curious and analytical person, I am seeking opportunities to utilize my technical knowledge and analytical skills for data-driven decision making.

Education

Universidad Politécnica de Madrid (UPM) - Bs Computer Engineering - 2019-2023

École Polytechnique Fédérale de Lausanne (EPFL) – Exchange student, Ms Data Science - 2022-2023

SUMA&MAS FORMACION INTEGRAL SL - Bootcamp in Programming with object-oriented languages and relational databases - 2021-2022

Experience

Globalzepp - Software Engineer Intern - 06/21 - 09/21

- 15-week internship to work on a recommendation engine for the CNET website using Java and Neo4j
- Converted the recommendation engine from Ant to Maven
- Gained a better understanding of the spring framework
- Aided in the process of redesigning in the underline graph schema for the recommendation engine

YIO Technologies – Machine Learning Engineer Intern - 06/22 - 09/22

- Worked on the implementation and optimization of Deep learning models to build a trading bot.
- Extracted and structured data recollected through the Binance API with Python.
- Achieved an accuracy of 82% through the use of recurrent neural networks, achieving an average of 6% profit over the course of a month.

Academic achievements

AdaByron - The official hackathon for college students in Madrid - 2021

- Chosen along with 3 other students to represent our university in the competition.
- Applied my knowledge of algorithms to solve given problems in the minimum time possible.
- Achieved the 3rd place.

A New Regularized Logistic Regression Method to detect Higgs Boson production - EPFL - 2022

A logistic regression is implemented to predict if a decay signature is a Higgs Boson or some other particle. The model is based on a vector of features of a collision event between two high-speed protons. It was trained on 8 sub-sets of the full dataset giving an F1-score of 0.790. More information can be found in the report.
https://github.com/mateo762/logistic-regression-higgs-boson

U-Net model to detect roads in satellite aerial imagery - EPFL – 2022

Implemented a convolutional neural network model to detect roads. The model was optimized through the modifications of layers, filters, and dropout. Data augmentation was performed in order to increase the number of labeled data available. Currently ranked 3rd out of 30 teams.
https://github.com/mateo762/unet-road-segmentation

Shortest path between 2 Kyiv metro stations – UPM - 2021

Implemented the algorithm A star to find the shortest path between 2 metro stations in the city of Kyiv. This shortest path can be calculated for the shortest distance or the least number of transfers. Created an interactive UI with NodeJS and deployed it on the internet, it can be found in the link below.
https://metro-kyiv.herokuapp.com/

Skills

- Python for data science: pandas, tensorflow, pytorch, sklearn, numpy, matplotlib.
- SQL and non-relational databases.
- Experience with OOP with Java, Python, C++, and Javascript.
- Strong background in mathematics and statistics.
- Experience with R for data analysis.
- Knowledge of Machine Learning, Applied Data Analysis and Distributed Information Systems.

Languages

- Spanish (Native)
- French (Native)
- English (C1 Advanced Cambridge)