Mouhyousse Youssef

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About me

Engineering student who has graduated from **CentraleSupelec** interested in data science and software engineering. I am looking for my first job as a **Data scientist**.

Education

CentraleSupélec **Sep. 2020 – Sep 2023**

Master of engineering *Gif-Sur-Yvette, France*

Relevant coursework: Machine learning , Natural language processing, Deep learning , Computational models of big data, Software applications engineering, Advanced programming in C++

Preparatory classes **Sep. 2018 – Sep 2020**

Mathematics and physics MPSI/MP *Rabat, Morocco*

Intensive preparation in Mathematics and Physics for highly competitive entrance exams to the French graduate general engineering schools..

Experience

BNP Paribas CIB **May 2023 - October 2023**

Data Scientist Intern *Paris, France*

- Developed scalable deep learning models (MLP, RNN with and without TBTT) using PyTorch to build investment strategies for options, with a focus on efficient neural network output constraints (Sparse outputs).
- Designed and implemented a deep reinforcement learning environment (Deep Q Learning, Double DQN, Dueling DQN) in PyTorch to optimize investment decision-making in real-time.
  Framework: Python (PyTorch, Pandas, ...)

Machine Learning for steel decarbonization (*ArcelorMittal*) **October 2022 - April 2023**

- Developed a machine learning model to optimize oxygen and mineral inputs for the steel decarbonization process through oxygen blowing, ensuring the final temperature and carbon ratio constraints were met.
  Framework : Pyhton (Sklearn, Pandas, scipy...)

Projects

Synthetic data generation **January 2024**

- Developed a project using the GPT API with a Streamlit interface to generate synthetic data based on specific constraints on columns and rows. The project also includes a chatbot that allows interaction with the generated data, enabling real-time modifications.

Devops project: Tweetoscope **December 2022 - Janvier 2023**

- Deploy a Java application that connects to Twitter API, filters out Tweets based on detected language (for instance), extracts the hashtags, counts how many times each hashtag appears in all the streamed Tweets, and displays the most popular ones, sorted by the number of occurrences; Using Kafka and Docker.
- • Computes statistics from data from the Twitter API.
  Framework : Kafka, Docker...

Skills

Data Science: Python (Pytorch, Sklearn, Pandas, Seaborn,...), SQL, R.

LLM Skills: Fine-Tuning (LoRa, QLoRa, Axolotl), RAG (Graph Knowledge), RLHF...

IT: Git, Docker, Kubernetes (beginner), Kafka

Mathematics: Probabilities, Statistics, Optimization...

Languages Skills: English (Proficient), French (Fluent), Arabic (Native).

Achievements

- Excellence scholarship from the Moroccan government.