Souleiman Ayoub

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WORK EXPERIENCE

Deloitte – Omnia   **Montreal, Canada**
Data Engineering Consultant   *January 2022 – Present*
- Delivered successfully on the frontend, backend and DevOps (**AWS**) side of a webapp that showcases the datasets owned by a banking institution.
- Team lead for the development of a platform that leverages **blockchain** technology to allow clients to profit from their underutilized datasets.
- Successfully developed pipelines, logic apps and function apps on **Azure Synapse** that allowed a government entity to migrate and modernized their backend infrastructure.

Desjardins Group   **Montreal, Canada**
Data Science (Intern)   *May 2021 – August 2021*
- Designed a **Flask microservice** which has an **unsupervised model** that can consolidate the financial profile of multiple users to offer recommendation.
- Was the spokesperson for my team when presenting our work to Desjardins partners and to Guy Cormier.
- Explored various approaches to fulfill our need for data, including generating our own datasets, searching for public datasets, and exploring available APIs.

Mitacs – Eduplan Solutions   **Montreal, Canada**
Data Science (Intern)   *May 2020 – August 2020*
- Created multiple ML models in **Python** whose purposes were to recommend means and goals to students. The models were then compared with each other using performance metrics.
- Communicated with the client to make sure our vision and expectations for the project aligned all the while discussing all our options with the resources available to us.
- Extracted information from the database by using **SQL.**

RESEARCH EXPERIENCE

Polytechnique Montreal   **Montreal, Canada**
Initiation to ML Research   *September 2019 – May 2020*
- Developed a **Computer Vision** algorithm that would **segment** newborn brains from 3D MRI scans with an accuracy of 90% on the validation set.
- Produced a thorough explanation of the algorithm in the form of a Jupyter Notebook and researched possible ways of making the model better.
- Scrapped a website to download the MRI scans.

ADDITIONAL EXPERIENCE

Shriners Hospital for Children. Android Developer
College Bois-de-Boulogne. Tutor in Mathematics and Programming

EDUCATION

Polytechnique Montreal   **Montreal, Canada**
Bachelor (B. Sc.) in Software Engineering (GPA: 3.63/4)

College Bois-de-Boulogne   **Montreal, Canada**
DEC in Computer Science and Mathematics (R-Score: ≈34)

CERTIFICATIONS
- Recipient of the **AWS** Certified Machine Learning - Specialty certification
- Recipient of the **AWS** Cloud Practitioner certification

Awards
- Mention of Excellence for outstanding performance at Polytechnique Montreal
- Recipient of the Admission Excellence Scholarship at Polytechnique Montreal
- 2nd place in a Polytechnique pitch competition
- 2nd place in a math competition at College Bois-de-Boulogne (COMC)

SKILLS

SOFTWARE DEVELOPMENT

Main Languages: Python, TypeScript, JavaScript, Java, HTML/CSS
Other Languages: C++, C, Bash, Solidity, Kotlin
Technologies: React, React-native, Angular, Redux, Django, Flask, Docker, Kubernetes, Git, Gitlab, Github, SQL, Postman, Node, p5.js, AWS, Azure, Firebase, Bootstrap, Ionic
Databases: PostgreSQL, SQLite, MongoDB, DynamoDB

DATA SCIENCE

Language/Technologies: Python, Tensorflow, Scikit-Learn, Keras, PySpark, Statsmodels, matplotlib, seaborn, plotly, numpy, SciPy, pandas, NLTK, Computer Vison, NLP, Classification, Regression, Reinforcement Learning, Image Segmentation, Style Transfer, Image generation

Languages: French, English

PROJECTS

MEV bot
- Wrote and deployed a liquidation bot in NodeJS which interacts with smart contract on the Ethereum network.

Exo Computer Vision Project
- Developed an **ML** algorithm to determine the approximate occupancy rate of parking lots thanks to recordings of **multiple cameras** per lot.
- Used various technologies such as PyTorch, TensorFlow and a PostgreSQL Database.

Chess AI
- Programmed a Python chess engine which includes the possibility of playing against my own ML bot made from scratch and Alpha-Beta pruning bot.
- Used the Memento, Strategy and Singleton design patterns.

Cross-platform multiplayer Gartic Phone
- Developed a version of Gartic phone usable on Android and PC where a player could play against a human or virtual opponent.
- Built a NodeJS backend and used WebSocket along with GraphQL to enable multiplayer play.

HACKATHONS
Dev: Google Tech Challenge / HackQC (3 days) / Hackathon BDC
AI: McGill Physics Hackathon (on GitHub - 4th place) / AI Hackathon at UdeM (6th place) / ConcordAI Artificial Intelligence Hackathon / LHGames
Security: 2 Capture the Flag (security hackathons)

HOBBIES
Chess (ELO: 1975)