**Souleiman Ayoub**

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**WORK EXPERIENCE**

**Deloitte – Omnia** **Montreal, Canada**

*Consultant* *January 2022 – Present*

So far, on my journey at Deloitte I’ve mainly been a part of 3 projects

* Delivered successfully on the frontend, backend and devops (**AWS**) side of a webapp that showcases the datasets owned by a banking institution
* Led the development team for a platform that leverages **blockchain** technology to allow clients to profit from their underutilized datasets
* Developed successful pipelines, logic apps and function apps on **Azure Synapse** that allowed CCQ 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
* Presented multiple times our team’s work to Desjardins partners and in front of Guy Cormier
* Explored multiple ways of addressing the need for data such as creating our own data, using a couple of public datasets and exploring 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 then compare them with each other thanks to performance metrics
* Communicated with the client to align on the vision for the project and manage expectations while explaining the different possibilities available with the available resources
* 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 included original ways of making the algorithm possibly 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) August 2018 – December 2021*

**College Bois-de-Boulogne Montreal, Canada**

*DEC in Computer Science and Mathematics (R-Score:* ≈*34) August 2016 – May 2018*

**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
* Currently working on writing it in Solidity

**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)