YOUSSEF SAMAAN

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EDUCATION

McGill University

Bachelor of Computer Science, GPA 3.8 Sep 2021 - Dec 2024 (expected)

- Courses: Programming Lang & Paradigms (functional programming), Software Design, Databases, OS, Machine Learning, Algorithms and data structures, Software engineering project, Intro to software systems, Intro to computer science (OOP), Probability, Calculus3, Linear Algebra, and Discrete Structures, Statistics.

SKILLS

Programming languages: Python, Java, Ocaml, MATLAB, C/C++, Bash, Unix/Linux, Git, HTML, CSS, JavaScript, SQL.

Frameworks/Libraries: Numpy, Pandas, Django, React, Node.js, Maven, JUnit, Express.js, Bootstrap, Tailwind.

WORK EXPERIENCE

Intern Data Science Analyst and Programmer, DermBiont - Python, c++, R, SQL May 2022 - Aug 2022

- Helped in the migration of the company's data from Dropbox to Sharepoint and from eLab to Benchling by writing functions to call APIs and by writing scripts to check if all the files were transferred.
- Wrote a program that renames files and folders and formats the data inside the HTML files so that the hyperlinks work.
- Wrote multiple scripts that found more than 25% differences between the values in the excel file and the data in the database then updated the values in the database.
- Wrote a Socket program so that the classifier files will have to be uploaded only once rather than having to re-upload all the classification files for every file that needs to be classified.
- Wrote a program that takes in an input file with multiple dictionary files, then parses the data and produces a report while also classifying the information into different sheets that corresponded to the dictionary files.

PROJECTS

Machine learning Projects

- Project 1: Created 3 classes, Linear regression, logistic regression, and Knn, from scratch. And used these 3 machine-learning models to analyze the Energy Efficiency and Qualitative Bankruptcy data sets by the University of California.
- Project 2: Created a Multi-Layer Perceptron class with regularization and different activation functions from scratch. And used it along with CNN class from TensorFlow to classify image data from the CIFAR-10.
- Project 3: Created Naive Bayes Class from scratch. And helped with fine-tuning the BERT model from Huggingface using SimpleTransformers and then analyzed the model and its attention matrix using the Transformers library. These were used along with other types of transformers to do sentiment analysis on the IMDB Movie Review Dataset.

Splendor

- Worked as a part of a team to create a board game (Splendor).
- Used Python for the GUI and Java, Maven, and Springboot for the backend.
- LobbyService (which was used to register and log in players), the database, and the game can all be started up using docker.

Movies Watched

- Created a website that displayed the movies, shows, and anime that I enjoyed watching.
- Built it using React, HTML, and CSS and uploaded it to Heroku.

Risk-Free Stock Trading Website

- Created a web app that lets people test out their trading strategy or just see if they want to invest in the stock market for free.
- Used stock API from Finnhub to get real-time stock prices.
- Created the website using Django and uploaded it on Heroku.

Event Management System

- Designed a Festival Management System that allows a person to create Festivals, Concerts, Workshops, Galas, Screenings, and Coming soon Events.
- Added extra functionality such as calculating profit and filtering.

Personal website

- Built this website to showcase my projects, skills, education, and experience.
- This website is also responsive to all devices and has a dark mode.

Solar System

- Programmed a realistic solar system.
- Used the velocities and the force of each entity onto the other to calculate their new position.
- Used a non-elastic simulation for when two entities collide with each other.