Omar Ahmad Elhakim

Education

Student at Computer Science, Ain Shams University (Expected Graduation: 2026)
GPA: 3.4

Summer Training Experiences

Data Engineering and Data Analysis Training
In this training we learned ways to get data like **APIs** and **web scraping**. Gathering that data and filtering it with **pandas** and **numpy** .Then visualizing and getting important information out of the data using **PowerBi**.(Computer Science faculty, Summer 2023)

Linux and Shell Scripting Training
Participated in a comprehensive training program covering **Linux** fundamentals and **Shell Scripting**. Sessions included Introduction to Linux, Mastering File Management and Redirection, Understanding Permissions and Security, Unlocking the Power of Shell scripting and Exploring **Vim** for Efficient Text Processing.(Computer Science faculty, Summer 2023)

Projects

Vibration Analysis Model
The project goal is to create a model that can read vibration time series and output the its faults and status. We created **tens** of models using **python**, and started changing and updating our model after some researches, changing the model's architecture,data standardization ways and more. We used **optuna** to find the best hyperparameters such as the learning rate , batchsize and window size ,wich all have a huge effect on the model's perfomance.For evaluating the model performance our main metrics were **validation loss** and **F1 score** , and we used confusion matrix for better visualization of its performance .In the way of finding the best model we have used **pytorch, fastai and tsai**.For data preprocessing **numpy** and **pandas** are used, and **matplotlib** for its visualization.

Gym Management System
In order to learn **OOP** and get a grasp of its beauty, we creates gym management system that allows its administrator to keep track of the gym's users , coaches, equipments and memberships .The program allows the user to create a new account , manage his membership , choose his coach , create and inbody and more.All while creating separate classes for each entity , using **java** and OOP's advantages like inheritance and encapsulation.

Vezeeta Database Design and Implementation
Designed a database for a Vezeeta-like healthcare system. The **database** kept track of the patients and their appointments. While keeping track of the doctors and the clinics they are available at. All while maintaining the relationship between those and adhering to the constraints. The database design included designing an **ERD** and a **schema** , then implementing it with **Oracle PL\SQL** , and the final step was to enter and access the data with **Oracle forms** .

Fireboy and Watergirl Game
Created a clone for the Fireboy and Watergirl game with **C++** and the **SFML** library. The challenges brought by the game was creating a gravity for two 2D characters in a map(which we also created) and putting obstacles for them . The game had a full **GUI** experience containing menus and visuals all the way to the end. Allowing the 2 players to start ,pause and retry if they lose. The project was made with Structured programming, no classes , only functions and structs were used

Programming Languages / Technologies

Python | C | C++ | Java | git | Java | Bash

Extracurricular Activities

Regularly participated in coding competitions and enhanced problem-solving abilities using C++ (ACM-Ascis Club, Ain Shams University)

Contact Information

Address: Maadi, Cairo, Egypt
Phone: +201127002031
Email: omarelhakim@icloud.com