Mosa Yaqoobi

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EDUCATION

University of Alberta Sep 2022 - Present
Bachelor of Science with Specialization in Computing Science *Alberta, Canada*

Relevant coursework: Data Structures And Algorithms, Basics Of Machine Learning, Introduction To File And Database Management, Digital Image Processing, Discrete Mathematics, Introduction To Optimization, Numerical Methods

Red Deer Polytechnic Completed
Electrical Engineering Technologist *Alberta, Canada*

Relevant coursework: C/C++ in embedded systems, PLC and Control, SCADA and HMI

EXPERIENCE

FACULTY OF SCIENCE (University of Alberta) Oct 2022 - Apr 2023
Undergraduate Research Work *Edmonton, AB*

- Developed a Python-based system to detect and analyze brainwave patterns using an EEG headset, enabling real-time neurofeedback and external device control.
- Implemented a PyQt6-based user interface to display EEG signals dynamically and provide actionable insights through neurofeedback.

PROJECTS

Library Management Database System | *Python, SQL*

- Developed a database management system utilizing SQLite and integrated it with Python, adhering to specified relational schema and SQL commands.
- Orchestrated group collaboration within a team of 3-4 members to ensure equal contributions and successful project completion.
- Implemented a command-line interface for efficient user interaction and task execution, focusing on user login, registration, and logout functionalities.

Apple Quality Model | *Python, Pandas, Matplotlib, Scikit-Learn, Google Collab*

- Built a classification model to predict the apple quality using logistic regression and decision tree algorithms
- Implemented logistic regression for binary classification of apple quality (good quality(1) or bad quality(0)).
- Utilized decision tree algorithm, random forest, and simple logistic regression to enhance the prediction of the quality of the model.

Social Networking Platform | *Python, Django, GitHub, SQLite*

- Developed a distributed social network that allows authors to post, follow, and interact across decentralized nodes, replicating features of modern social platforms
- Optimized API response times by about 30% using query optimizations and indexing in PostgreSQL.
- Enforced secure node-to-node communication using HTTP Basic Authentication for federated social media.
- Built a REST API for post sharing, following users, and federated node communication.

Event Lottery System Application | *Java, Firebase*

- Led a team of 5 members to design and implement the Event Lottery System Application, ensuring efficient task allocation, code reviews, and project delivery on schedule.
- Integrated QR code scanning for event details and firebase for secure, real-time data management
- Improved user experience with a notification system, sending instant alerts to participants, which increased event engagement by 20%.

TECHNICAL SKILLS

Languages: Python, C/C++, R, SQL, Julia, Java, JS
Developer Tools: Github, Git, Visual Studio Code, Google Collab, Android Studio
Libraries: NumPy, Matplotlib, Scikit-Image, Scikit-Learn, Math, Pandas