

Mosa Yaqoobi

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EDUCATION

- **University of Alberta** Sep 2022 – Present
Bachelor of Science with Specialization in Computing Science
Relevant coursework: Data Structures And Algorithms, Advanced Algorithms, Basics Of Machine Learning, Introduction To Linear Programming, Optimization in Machine Learning, Introduction To File And Database Management, Discrete Mathematics, Numerical Methods.
- **Red Deer Polytechnic** Completed
Electrical Engineering Technologist
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

- Full Stack Mock Library System** — *FastApi, OAuth2, PostgreSQL, CSS/HTML, ReactJS*
- Designed and implemented asynchronous RESTful APIs using FastApi for user and book management, enabling real-time book reservations in under 100ms and supporting hundreds of concurrent users.
 - Optimized SQL queries with indexing and schema design improvements, resulting in faster search and retrieval of records.
 - Developed an AI-powered help section with a chat agent, providing users with instant, automated assistance.
- Apple Quality Model** — *Python, Pandas, Matplotlib, Scikit-Learn, Google Collab*
- Built a classification model to predict 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 prediction accuracy.
- Social Networking Platform** — *Django, GitHub, PostgreSQL, Docker*
- 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 ~30% using query optimizations and indexing in PostgreSQL.
 - Enforced secure node-to-node communication using HTTP Basic Authentication for federated social media.
 - Designed a REST API supporting post sharing and user following.
- 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.

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