TAHA YAR KHAN

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TECHNICAL SKILLS

- **Languages:** Python, Java, JavaScript, CSS, HTML, Bash, C, C++, Rust, Haskell
- **Databases and Data Management:** SQL, MongoDB, NumPy, Pandas, TensorFlow.js, Scikit-learn
- **Tools and Frameworks:** React, Chakra UI, Material-UI, Bootstrap, Tailwind, Node.js, Express.js, Mongoose, JWT, Flask, AWS, Docker, Git, GitHub, Postman, Linux, Windows, macOS, Visual Studio Code, Figma, REST API, RESTful API, Axios, Google Suite, Microsoft Office 365 (Excel, PowerPoint, Word).

EXPERIENCE

Software Developer Intern **May 2024 - August 2024**

MAX - Muslims Achieving Excellence

- Developed login and signup components with **React** and **JavaScript**, enhancing **authentication workflows** and **form validation**.
- Implemented a **multi-step profile setup** with **Chakra UI** and **custom React hooks**, improving **UI/UX** and **code maintainability**.
- **Managed input state and event handling** in forms, boosting **data accuracy** and **UI consistency**.
- **Integrated front-end with REST API**, optimizing **data flow** for **real-time updates** and enhancing UX.
- Wrote **Lambda functions** for the **AWS SAM Application**, optimizing back-end processes and improving system scalability.

PROJECTS

Carbon Footprint Predictor **August 2024 - Present**

JavaScript, TensorFlow.js, Axios, React, Node.js, Express, MongoDB, REST API

- Developed a **neural network model** using **TensorFlow.js** to predict carbon footprint achieving a **mean squared error (MSE) of 0.02**.
- Applied data preprocessing (normalization, one-hot encoding) and a sliding window approach, **enhancing prediction accuracy by 25%**.
- Integrated **Axios** with JWT authentication for secure data fetching, **reducing retrieval time by 40%** and better model training efficiency.
- Achieved a **15% improvement in overall model accuracy** and **reduced model loading time by 50%** using local storage persistence.

Credit Card Fraud Detector **June 2024**

Python, NumPy, Pandas, Scikit-learn

- Utilized machine learning techniques, specifically **logistic regression**, as the classification algorithm to detect fraudulent transactions.
- **Achieved an accuracy of 95%** on the testing dataset, contributing to fraud detection with high precision.
- Utilized **stratified sampling** during the train-test split to ensure proportional representation of fraudulent transactions.

My AI Tutor **May 2023**

Python, React, JavaScript, Cohere's API

- Utilized **Python** and leveraged **Cohere's API** to create a robust and fully functional backend system for the AI Tutor.
- Integrated **React** and **JavaScript** for interactive design and **Flask** to link frontend and backend, ensuring an engaging user experience.
- **Accelerated response speed by 3 seconds** using Cohere's co.classify function, contributing to a **10% faster** tutoring experience.
- Utilized **50 test examples** to train **Cohere's API**, enhancing its ability to classify input and resulting in a **30% increase** in accuracy of generated responses.

EXTRACURRICULAR

VP Finance | Toronto Metropolitan University's Google Developer Student Club **Sep 2023 - Present**

- Efficiently creating and maintaining the financial budget for club events, ensuring that all expenses are tracked and managed effectively.
- Collaborated with the GDSC Lead to secure **3 sponsors** for events, which has contributed to the financial success and growth of the club.
- Efficiently organized four Fall 2023 events, **saving 25% of TMU's USSTM-provided finances** and resulting in a net profit.
- Assisted the GDSC Lead in organizing workshops focused on essential skills such as **Firebase, TensorFlow, Android and GitHub** with **150+ attendees**.

EDUCATION

- Toronto Metropolitan University (Formerly Ryerson University) - Bachelor of Science, Computer Science 2022-2026 (Expected)
- **CGPA:** 3.38/4.33
- **Relevant coursework:** OOP, Data Structures and Algorithms, Software Engineering (Agile methodologies), Operating Systems, Probability and Statistics, Machine Learning, Artificial Intelligence, Database Systems, Data Analytics, Data Visualization and Computer Security.