Muhammad Hassan Tariq

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EDUCATION

University of Calgary Calgary, Canada

Bachelor of Science in Software Engineering, Minor in Data Science *Expected April 2023*

- Clubs: Developer Student Club, Competitive Programming Club, Engineering Leadership Program
- Coursework: Data Structures & Algorithms, Operating Systems, Software Development/Design, Computer Networks, Data Base Management Systems, Embedded Systems, Software Architecture, Computer Graphics

TECHNICAL SKILLS

Languages: Java, C/C++, JavaScript, HTML/CSS, SQL, Python
Frameworks/Libraries: OpenGL, React.js, Node.js, Express.js, Spring, JUnit, DS/ML (Scikit-learn, Pandas, NumPy, PyCaret, XGBoost, Keras, PyTorch)

EXPERIENCE

Engineering and Technology Co-op Student January 2021 - Present

TELUS *Calgary, Canada*

- My role consists of working on and helping with various **machine learning**, **data science**, and **data engineering** tasks as part of the Advanced Analytics and AI Enablement Team that is responsible for working with various vendors/clients and internal teams to deliver cutting edge AI/ML and data driven business solutions.
- Prototyped a robust machine learning classification model for predicting pet owners using various classification algorithms. Presented data science findings to peers, illustrating the potential of the data and the evaluation of the models. Migrated model to **GCP** and recreated using **BQML** in **BigQuery** as well as **XGBoost** in **Vertex AI**. Technologies: Python(Scikit-learn, Pandas, NumPy, PyCaret)
- Improved the usability of an automation script used for geofencing through extensive documentation and migrated the script for use in a different environment. Technologies: Python(Pandas, NumPy, PyODBC, etc.)
- Provided comprehensive data analysis on a network improvement churn reduction business case leveraging 5G data. Compiled a final list of target customers through extensive querying and various query prototypes. Currently in the final stage of the campaign. Technologies: SQL(IIAS Netezza, Aginity)
- Participated in the Agorize AI for Future Challenge and came up with an AI business idea with a team of interns.
- Prototyping an LSTM deep learning model for predicting network experience perception. Technologies: Python(Keras, Scikit-learn, Pandas, NumPy)

PROJECTS

EduConnect | *HTML, CSS, JavaScript, Node.js, Express.js, MongoDB, Mongoose* February 2021

- Developed a multi-functional full-stack web app for students using HTML/CSS/Bootstrap4 for the front-end and JavaScript/Node.js/Express.js for the back-end. Users account data and course schedule information is stored in a MongoDB/Mongoose Database. Built as part of the CalgaryHacks2021 hackathon.
- The complimentary discord bot is created using JavaScript/Discord.js and I leveraged the Google Cloud DialogFlow API to create an integrated AI chat bot.

Sage Medical Clinic Appointment Booking App | *HTML, CSS, JavaScript, Node.js, SQL* December 2020

- Developed a full-stack app using HTML/CSS/Bootstrap4 for the front-end and JavaScript/Node.js for the back-end. Users account data and appointment information is stored in a local MS SQL Server.

Student Course Registration App | *Java, Spring, SQL, Git* April 2020

- Developed a full-stack Java application using the spring framework and SQL database
- Explored many practical concepts including object-oriented design and development, client-server architecture, multithreading, JDBC, GUI, Java MVC and Git version control

SCHOLARSHIPS & AWARDS

2020: Jason Lang Scholarship
2019: Jason Lang Scholarship, Calgary Co-op Scholarship Award
2018: SSE Bursary for Engineering Students, Alberta Rutherford Scholarship, Calgary Co-op Scholarship Award