Mahir Khandaker

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Skills

- C | C# | Java | JavaScript | Python | C++ | SQL | MATLAB | React.js | Node.js | Express.js | HTML5 | CSS3
- AWS | Jenkins | Git | GitHub | Postman | Cantata | MongoDB | PostgreSQL | Docker | Android
- Full-Stack | Backend | Frontend | Embedded Systems | Database Management | Machine Learning | Unit Testing | CI/CD

Professional Experience

Full-Stack Developer | MAX Gala | Toronto, ON, Canada | June 2021 – August 2021

- Led a team that implemented a Q&A feature, empowering users to post and answer questions, resulting in a 30% increase in average user engagement on the website.
- Designed the feature's responsive front-end UI using **React.js**, **Bootstrap**, **JavaScript**, **HTML** and **CSS**.
- Used **Python, Amazon API Gateway**, **Amazon Relational Database**, and **AWS Lambda** to facilitate the seamless execution of REST API requests to perform CRUD operations to modify the webpage.
- Enhanced the functionality and performance of the web application by using pagination and lazy loading, resulting in 20% faster loading times and improved user experience.
- Skills Utilized: AWS (Amazon RDS, S3, Lambda, API Gateway), React.js, JavaScript, Python, PostgreSQL, Postman, Docker, HTML, CSS, Bootstrap, GitHub, Git

Software Developer Co-op | TD Bank | Toronto, ON, Canada | September 2021 – December 2021

- Facilitated multi-team meetings to brainstorm new functions to meet the specific needs of internal employees. Resulted in the development of over 100 customized functions within the RSA ARCHER application.
- Leveraged **C#**, **MS SQL,** and the SQL Server Integration Services (**SSIS**) platform to seamlessly perform ETL pipeline processes. Processed multiple datasets spanning across various departments, covering active, deprecated, and their corresponding replacement functions, including their definitions. Streamlined the developmental process for internal employees, optimizing efficiency in function creation.
- Demonstrated strong adherence to the **AGILE** methodology by actively participating in sprint planning, daily stand-ups, and backlog refinement. Collaborated with team members to promptly identify and resolve issues, ensuring efficient workflow, and timely achievement of sprint goals.
- Skills Utilized: C#, SQL, SSIS, RSA ARCHER, Jira, Bitbucket, Git

Embedded Software Developer Co-op | Molex | Waterloo, ON, Canada | January 2022 – August 2022

- Enhanced the reliability and performance of a multi-threaded legacy codebase by refactoring it into 2 single concurrent processes in **C**, limiting the possibilities of race conditions and resulting in a 10% decrease in runtime.
- Designed and executed a comprehensive suite of unit and integration tests, covering various scenarios including edge cases and boundary conditions, to verify internal functionality, proper parameter usage, and accurate data handling.
- Skills Utilized: C, Python, Cantata, Jira, Bitbucket, Git, Jenkins

Projects

Capstone Project – Voice Activated Bike Turn Signal | September 2022 – April 2023

- Utilized Edge Impulse, **TensorFlow** and 50,000 audio samples from Google Speech Commands to develop a machine learning model that demonstrated a 95% accuracy in voice command detection.
- Implemented real-time processing on an Arduino Nano 33 BLE board in **C++**, triggering LED lights for clear turn signals.
- Skills Utilized: Arduino IDE, Edge Impulse, Tensor Flow, C++, GitHub, Git

Customized Python Trading Bot Full Stack Website | October 2023 – Present

- Created a **Flask/React** full stack website allowing users to craft their own trading bot and back test their strategy against the S&P500, NASDAQ and a Buy & Hold Strategy. Users can also view their realized profit/loss and save their strategies.
- Created API endpoint to calculate user profit/loss using stock data from Alpha Advantage API and the **Pandas** library.
- Skills Utilized: Python, Pandas, NumPy, Matplotlib, Flask, React.js, Node.js, JavaScript, Bootstrap, HTML, CSS, Git, GitHub

Rotator Cuff Rehabilitation Android App | January 2020 – April 2020

- Designed and developed a patient rehabilitation monitoring Android app using **Java** and **C++.**
- Received 1st place from McMaster University's iBioMed Faculty for the best rehabilitation project.
- Skills Utilized: Android Studio, Arduino IDE, Java, C++, XML, Git, GitHub

Education

Bachelor's in Electrical and Biomedical Engineering | McMaster University | Graduated April 2023

- Relevant Courses: Object-oriented programming in C, Data Structures & Algorithms in Java, Capstone Project