

MAHIR KHANDAKER

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Introduction

A recent Electrical Engineering graduate with a versatile skill set and a fervent passion for software development, technology innovation, and web solutions. With a proven track record in both software and web development, I thrive on tackling complex challenges and transforming them into effective solutions. My experience includes crafting seamless web experiences, collaborating closely with cross-functional teams, and leveraging cutting-edge technologies to drive impactful results. Whether it's enhancing performance, streamlining processes, or fostering collaboration, I am committed to delivering excellence in every endeavor.

Professional Experience

Molex

Waterloo, ON, Canada

Embedded Software Developer Intern/Co-op

January 2022 – August 2022

- **Enhanced the reliability and performance of a multi-threaded legacy codebase by refactoring it into 2 single concurrent processes**, 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.
- **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, Python, Cantata, Jira, Bitbucket

TD Bank

Toronto, ON, Canada

Software Developer Intern/Co-op

September 2021 – December 2021

- Leveraged the SSIS platform to seamlessly combine datasets from multiple departments, **performing advanced data modeling and data profiling queries** to extract valuable insights using **SQL**.
- **Developed customized functions within the RSA ARCHER application**, tailoring solutions to meet the specific needs of TD Bank's employees.
- **Skills Utilized:** C#, SQL, SSIS (SQL Server Integration Services), RSA ARCHER, Jira, Bitbucket

MAX Gala

Toronto, ON, Canada

Software Developer Contract

June 2021 – August 2021

- **Implemented a new feature on the MAX Aspire web application**, empowering users to post and answer questions, fostering collaboration and knowledge sharing among experienced professionals and early-career individuals.
- **Enhanced the functionality and performance of the MAX Aspire web application**, resulting in improved user experience and **20% faster response times**.
- **Skills Utilized:** AWS (Amazon RDS, S3, Lambda), Docker, React.js, Express.js, Python PostgreSQL, GitHub, Git

Education

McMaster University - Bachelors in Electrical Engineering

Graduated April 2023

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

Skills

Languages: Java, JavaScript, Python, C, C++, C#, SQL, PostgreSQL, HTML, CSS, MATLAB

Technologies: Node.js, React.js, Express.js, Git, GitHub, MongoDB, Docker, AWS, Google Cloud

Tools: Visual Studio, Visual Studio Code, Arduino IDE, Cantata, Atlassian Development Tools

Projects

Final Year Project – Voice Activated Bike Turn Signal

September 2022 – April 2023

- **Collaborated as a key member of a 4-person team to conceive, design, and develop** a voice-activated bike turn signal device, enabling users to conveniently indicate their intended turns.
- **Utilized Edge Impulse and leveraged audio samples from Google Speech Commands to develop a machine learning model (MLM)** capable of accurately detecting voice commands for left and right turns.
- **Demonstrated technical proficiency by uploading the MLM onto an Arduino Nano 33 BLE board and implementing real-time processing of voice commands using C++**. This functionality triggered LED lights, providing clear visual cues to the user and other individuals.
- **Skills Utilized:** Arduino IDE, Edge Impulse, Tensor Flow, C++, GitHub, Git