Mohib Amin

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WORK EXPERIENCE

SQL Developer Co-op | Environment Climate Change Canada   Jun. 2024 - May. 2025

- Designed and optimized complex SQL queries, stored procedures, functions, and triggers to meet client needs while managing tables, views, indexes, and schemas in production systems.
- Collaborated with developers to support database-driven applications, troubleshoot performance issues, and implement best practices for data security, user roles, and encryption protocols across multiple systems.
- Documented database structures, workflows, and technical best practices to support team knowledge sharing, ensure consistent development standards, and improve onboarding efficiency for new team members.

Software QA Co-op | Environment Climate Change Canada   May. 2025 - Sept. 2025

- Contributed to continuous improvement of QA processes by integrating automation using Robot Framework.
- Performed functional testing to validate application behavior against business requirements by writing and executing detailed test cases for new features and regression scenarios.
- Used Azure DevOps to track bugs, manage user stories, and organize test plans and test suites while supporting end-to-end testing throughout the software development lifecycle.

EDUCATION

Bachelor of Engineering in Computer Engineering

Toronto Metropolitan University (Formerly known as Ryerson University)   Sep. 2021 - Present

- Relevant courses: Software Systems, Computer Programming Fundamentals, Digital Systems, Object Oriented Engineering Analysis and Design, Engineering Algorithms and Data Structures, Database Systems I.

SKILLS

Programming Languages: Java, HTML, CSS, MATLAB, C, JavaScript, SQL, JavaFX, Python, VHDL
Platform/Tools: Git, IntelliJ, Linux, National Instruments, Microsoft [Teams, Word, Excel, Powerpoint], Arduino, UNIX
Certifications: CPR Trained, Electronic Arts - Software Engineering Job Simulation

RELEVANT PROJECTS

Smart Parking Pathfinder (Senior Design Project - 1st Place) | *Arduino, Python (Flask, Socket.IO), JavaScript, HTML, CSS*

- Architected a real-time smart parking solution connecting Arduino-based sensors, LED indicators, and servo-controlled gates to a live, browser-based parking map for continuous occupancy monitoring.
- Integrated a Python backend using Flask and Socket.IO to process serial data from hardware and broadcast real-time parking occupancy updates to connected clients with minimal latency.
- Constructed an interactive multi-level parking UI showcasing live availability, spot classifications (EV, accessibility, family), and dynamic counts using responsive front-end components.
- Validated system behavior by implementing a simulation mode and manual update API to test real-time performance, verify data flow integrity, and support efficient debugging without physical hardware.

SQL Database Management System & GUI | *Java, JavaFX, Java Scene Builder, SQL*

- Lead 4 group members to create a telecommunication application using Java, JavaFX, Java Scene Builder, SQL for the database of the API, and various debugging methods to finalize the product.
- Developed and wrote code for all Java classes of the application, while connecting the SQL database to the API, allowing new information inputted from the API (by a user) to be registered into the database.
- Engineered a GUI that utilized complex queries and modification of the database.

Reminder Bot for Discord | *Python, Pycharm*

- Established a robust Discord reminder bot, building 3 modularized files to establish seamless Discord connectivity and user interaction, alongside designing 7 essential commands for versatile tool utilization, including reminder setting and dice rolling.