Zuhair Khan

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EDUCATION

Toronto Metropolitan University (Formerly Ryerson University) Toronto, ON
B.Eng, Computer Engineering *Expected graduation, May 2026*
- Electrical & Computer Engineering Student Society (Exec. Advisor, VP Operations, Jr. Rep, FYR)
- RUHacks 1st Place, REC 1st Place, MET Eng Comp 3rd Place
- Related Coursework: Data Structures & Algorithms, Advanced Algorithms, Software Design & Architecture, Computer Organization & Architecture, Operating Systems, Database Systems

EXPERIENCE

Software Development Engineering Intern May 2024 – July 2025
Ontario Power Generation (OPG) *Bowmanville, ON*

System C & OHD Application
- Developed **RESTful APIs** with **Python Flask** and **pymssql** to enable seamless database communication.
- Implemented a 3-tier architecture and **MVC** software DP to streamline application structure and maintainability.
- Automated resource-intensive workflows, optimizing individual request efficiency by **93.33%**.
- Led the design and development phase of the project, coordinating with cross-functional teams and stakeholders.

Matrix Application
- Modernized a critical work plan matrix program using **Python Flask**, **VBA**, and **pyodbc** to support operations at Darlington Nuclear.
- Developed an **algorithm for NG_M data types** that **cut crew scheduling from 16 hours to instant**, transforming runtime efficiency.

RDBMS Oversight
- Performed SQL queries using **Microsoft SQL Server Management Studio** to fulfill ad hoc data requests.
- Automated routine data pulls to enhance efficiency and accuracy across various departments.

Power Platform Solutions
- Built and maintained multiple **Power BI dashboards** for real-time metrics and reporting.
- Developed and supported **Power Apps** to facilitate stakeholder interaction with workplans, aligning with business processes and governance.

Project Manager (CEN 100) Sep. 2023 – Dec. 2023
Toronto Metropolitan University *Toronto, ON*
- Guided and mentored 35 first-year engineering students to ensure a smooth transition into the program.
- Facilitated weekly tutorials introducing the concepts of collaborative research and project execution to students.

PROJECTS (FOR ADDITIONAL PROJECTS AND LOGS, VISIT -> PROJECTS)

QSense – Smart IoT Device Jan. 2025 – Present
- Designed and implemented a smart home device using **ESP32**, **TFT display**, and **C++/Arduino**, capable of showing time, weather, and daily prayer schedules.
- Built companion mobile app with **React Native (TypeScript, Expo)** for device configuration (WiFi, location, prayer times), featuring automated setup and persistent storage.
- Developed and deployed backend APIs in **Django/Python** on **Render**, enabling real-time syncing of prayer timings, weather data, and geolocation services.

AI Enhanced Caption Generator | *OpenAI API, Python, Front-End Development* Aug. 2023
- Developed an AI-powered video caption generator using the **OpenAI API**.
- Implemented a multi-step process to decode video, transcribe audio, and parse text utilizing prompt-engineering to generate relevant video captions.

TECHNICAL SKILLS

Languages: Python, C/C++, Java, Dart, C#, SQL, JavaScript, HTML/CSS
Frameworks: Flask, Flutter, React, Django, Node.js, JUnit
Technologies: Git, Docker, PowerBi, PowerApps, Azure DevOps, GCP, Cloudflare, Agile (Kanban), SSMS
Certificates: Python AI Development: Intermediate (Skillsoft Percipio)