

# KHUSHI UPADHYAY

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## EDUCATION

York University, Toronto, Canada

**Bachelor of Computer Engineering (Honors) | Certificate in Technology Entrepreneurship**

YorkU Faculty Associate Graduate Award (2023–2024)

Sep 2019 – Apr 2024

## EXPERIENCE

### Software Engineer – Quarterhill Inc.

Jul 2024 – Aug 2025

- Developed backend for riteOSS Payment Plan system using **Java, Python, and PL/SQL**, enabling flexible toll payment schedules.
- Built scalable **REST APIs** in a **microservices architecture** (Java/Python), deployed with **AWS Lambda** and **GitHub Actions**.
- Created a Python-based tool with **ML models** for automation insights such as transaction patterns and anomaly detection.
- Partnered with QA and support teams to troubleshoot and optimize high-volume schedulers handling **1K+ transactions per cycle**.
- Wrote **SQL queries** and reporting solutions for transaction validation, improving data accuracy and compliance.
- Automated workflows with **Python** and **shell scripting**, reducing manual effort by **40%**.
- Built **CI/CD pipelines** with GitHub Actions and shell scripts, cutting release time by **70%** and improving deployment reliability.
- Developed **checkpoint functionality** for refunds (check, credit card, bank transfer, cash) with database testing frameworks.
- Delivered secure financial data processing with **dynamic SQL queries**, ensuring compliance.

### Frontend Developer – YuRide

Sep 2022 – Dec 2022

- Designed and developed frontend components for a ride-booking app using **ReactJS** and **Java (Android Studio)**, enabling real-time ride management for 100+ users.
- Enhanced **UI performance** by integrating REST APIs and streamlining frontend logic, reducing load time by ~15% and improving responsiveness across web and Android platforms.

### Web Developer – Excel Lassonde, York University

Aug 2021 – Sep 2022

- Collaborated with a team to design and develop responsive web pages using **HTML, CSS, and JavaScript**.
- Implemented **SSO authentication** and automated email reminders, increasing session attendance by ~25%.
- Improved site usability and performance by optimizing layouts and implementing modern front-end practices.
- Worked in an Agile environment with version control (**Git**) to manage tasks and ensure on-time delivery.

## PROJECTS

### AI Chatbot Portfolio – *Next.js, React, Azure OpenAI, JavaScript*

- Built a responsive portfolio integrating an **AI-powered chatbot** using Microsoft Azure OpenAI for real-time user interaction.
- Implemented full-stack features with **Next.js, React**, and **Node.js**, enabling dynamic content rendering and smooth UX.
- Deployed and provisioned **Azure resources (App Service, OpenAI)** with **Terraform**, enabling reproducible deployments.

### Machine Learning Model for Predictive Analytics – *Python, Scikit-learn, Pandas*

- Built ML models (**KNN, SVM, Random Forest**) to predict human activities (**walk, fall, sit**) from Wi-Fi CSI data, demonstrating practical predictive analytics applications.
- Preprocessed and reshaped 3D signal data to feed ML pipelines, achieving **~87% classification accuracy**.
- Analyzed confusion matrices and performance metrics, optimizing model responsiveness for **real-time smart home use cases**.

## AWARDS / CERTIFICATIONS

- AWS CloudOps Engineer Associate (SOA-C03) (In Progress)
- AWS Generative AI Applications Professional Certificate (Aug 2025)
- Microsoft Azure Fundamentals (AZ-900) (Dec 2024)

## SKILLS

**Languages:** Java, Python, C#, SQL, JavaScript, TypeScript, C++, HTML/CSS

**Frameworks & Libraries:** Spring, SpringBoot, React, Next.js, Node.js, Express.js, Tailwind CSS, Selenium, JUnit, Cucumber

**Cloud & Tools:** Git, GitHub Actions, Jenkins, Terraform, AWS (Lambda, S3, Step Functions), Azure (App Service, OpenAI), Revit

**Practices:** CI/CD, REST APIs, Agile, Software Design Patterns, Performance Optimization

**Soft Skills:** Cross-functional collaboration, problem-solving, adaptability, stakeholder communication