Mohammad Ibrahim Khan

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EDUCATION

Carleton University   **Ottawa, Ontario**
Honours B.C.S (Bachelor of Computer Science)   Sept. 2019 – Jun. 2024

- **Stream:** Computer & Internet Security
- **Awards:** Dean's Honour List (2020-2022), University Entrance Scholarship, George Fierheller Scholarship, Gerhard Herzberg Scholarship
- **Related Coursework:** Object-Oriented Programming, Computing in Python, Data Structures and Algorithms, Database Management Systems, Software Engineering Practices

EXPERIENCE

Tread   **Toronto, Ontario**
Software Developer (Co-Op)   *Jan. 2022 – Aug. 2022*

- Developed reusable **React** components for truck driver dashboards which reduced payroll disputes by **95%**
- Automated subcontractor scheduling with advanced React calendar features, cutting manual data entry and improving scheduling accuracy by **50%**
- Collaborated effectively in a cross-functional team environment to deliver business outcomes, focusing on user-centric problem-solving
- Resolved complex technical incidents and bugs during **QA** phases using **Jira**, reducing post-launch defects by 40% and ensuring high system reliability for end-users

PROJECTS

VeriNews - AI Fake News Detector   *Jun. 2025 – Nov. 2025*
JavaScript, Python, Node.js, React, TailwindCSS Hugging Face Transformers, Docker, MongoDB

- Trained a custom **transformer-based NLP model** by fine-tuning **RoBERTa** on **50,000+** labeled news articles on benchmark datasets to classify news articles as being either real or fake, achieving **92%** classification accuracy
- Implemented **Node.js** backend with **REST APIs** to process news URLs and text for classification, integrating the model via **Hugging Face** pipelines and optimizing inference time by **40%**
- Evaluated model performance using **Machine Learning** metrics including **accuracy**, **F1**, **precision** and **recall**, logging results in **MongoDB** for continual analysis and monitoring
- Developing responsive frontend dashboard with **React** and **TailwindCSS** for real-time news classification and confidence visualization

CarletonStudy Pro – AI Exam & Study Optimizer for Carleton University   *Oct. 2025 - Present*
Spring Boot, React, Python, FastAPI, scikit-learn, PostgreSQL, AWS, Docker

- Developing a full-stack AI platform that generates and optimizes study plans for **200+** Carleton University students, reducing manual planning time by **70%**
- Implemented **FastAPI** microservice integrating **Random Forest ML** predictions with a **Genetic Algorithm** for optimized study-scheduling
- Architecting **Spring Boot** backend and **React** dashboard for user-specific scheduling, visualization, and calendar integration
- Targeting deployment on **AWS** with **Docker** and **CI/CD** for scalable, production-grade delivery

Real-Time Restaurant Management System   *Oct. 2022 – Dec. 2022*
C, QNX Neutrino, QNX Momentics, QDB Database

- Developed a high-performance restaurant management system with **QNX Neutrino** to achieve real-time order processing and client-server communication
- Designed a robust **QDB** database schema to manage reservations and orders, improving data retrieval speed by **40%**
- Implemented user-friendly interface for staff to manage reservations, orders, and table availability

SKILLS

Languages and Frameworks: Python, Java, C, C++, JavaScript, HTML/CSS, TailwindCSS, Node.js, React, Express.js, Spring Boot
Platforms and Tools: OpenStack, Git, Linux, Kubernetes, AWS, REST API, Docker, CI/CD (GitHub Actions), Hugging Face
Databases: MongoDB, MySQL, PostgreSQL**,** NoSQL

Certifications: AWS Certified Cloud Practitioner, AWS Certified Developer - Associate, Linux Professional Institute - Linux Essentials, Kubernetes and Cloud Native Associate (KCNA), HashiCorp Certified: Terraform Associate