Haashir Khan

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Education

University of Toronto   **Expected December 2025**

Bachelor of Science in Computer Science

Relevant Coursework: *Machine Learning, Neural Networks & Deep Learning, Databases*

Work Experience

Software Developer Intern   **May 2022 – August 2022**

Univeris Corporation   *Toronto, ON*

- Optimized Python and Golang data pipelines by using parallel processing techniques and efficient memory management reducing execution time by 40%
- Improved automated KYC data validation, adding automated error detection and correction mechanisms, reducing onboarding errors by 20%
- Refined SQL indexing strategies reducing query time by 6% for large-scale financial datasets

Projects

Discover Me - DeerHacks IV Hackathon Project   **Feburary 2025**

Node.js, Next.js, React, JavaScript, Vercel, HTML, CSS, OpenAI API   Github | Website

- Built an AI-powered travel recommendation web app using Next.js (React, Node.js) and OpenAI's LLM API, delivering personalized destination matches based on user personality quizzes
- Utilized Google Maps and Street View APIs to enhance user engagement, by providing an interactive, immersive exploration of 5 recommended locations
- Deployed on Vercel with a modular architecture, allowing future enhancements such as real-time travel data and social features
- Coded a scalable and responsive UI/UX, improving user retention and achieving a 90% user satisfaction rate

NFL Prediction Model   **September 2024 – December 2024**

Python, PyTorch, Pandas, NumPy, Jira   Github | Report

- Developed a Mixture of Experts (MoE) model integrating RNN, CNN, and MLP architectures to predict NFL game outcomes, achieving a 10% accuracy improvement.
- Processed and engineered features from the Big Data Bowl 2025 dataset (52M+ rows), including spatio-temporal tracking and game metadata.
- Conducted exploratory data analysis to validate key insights, such as home-team advantage and percentile-based player metrics, improving feature selection and interpretability.

Alzheimer Prediction Web App   **September 2024 – October 2024**

Python, Scikit-Learn, Streamlit   Github | Website

- Developed an Alzheimer's risk prediction web app, aiding early diagnosis with a 85% model accuracy, deployed for public using Streamlit.
- Increased accuracy by 17% through hyper-parameter tuning (L1 penalty, SAGA solver) and improved pre-processing of 2100+ data points.

Microservices-Based E-commerce System   **December 2023 – January 2024**

Java, JUnit, SQL, Python, Flask, PostgreSQL   GitHub

- Designed User, Product, and Order services using Java, each backed by PostgreSQL databases for efficient data storage and retrieval
- Built a Flask-based Load Balancer, enhancing inter-service communication between 12+ service instances through round-robin scheduling
- Maximized PostgreSQL indexing for high-volume transactions (over 1 million orders in 4 minutes)
- Implemented RESTful APIs with data persistence layers and transaction management for atomic operations

Skills

Programming Languages: Python, SQL, Java, Go
Frameworks & Libraries: PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn
Tools & Platforms: Docker, AWS, PostgreSQL, Git, Unix/Linux
Developer Skills: OOP, Data Structures, Algorithms, Agile, Machine Learning, Data Visualization, Neural Networks, REST