HAIDER MALIK

Toronto, Canada

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Education

York University   Expected Graduation Date: **June 2027**
BEng in Software Engineering (Specialization in Big Data)   Toronto, Canada

Relevant Coursework

- Intro and Advanced OOP
- Embedded Systems
- Data Structures
- Software Development Project
- Computer Organization
- Mechatronics Programing

Technical Skills

Programming Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, C, C++, C#, Kotlin, Swift, SQL, R
Dev Tools/ Frameworks: Git, Django, Flask, React Native, ReactJS, Next.js, Node.js, ExpressJS, Tailwind CSS, Spring Boot, Docker, AWS, Google GCP, REST API, TensorFlow, PyTorch, Scikit Learn, Pandas, Numpy, OpenAI, Jira, MS Power/Suite
Databases: SQL, PostgreSQL, SQLAlchemy, MongoDB, Google Firebase, Chroma DB, Oracle

Projects

TradeSenseAI: AI-Powered Stock Predictor ↗ | *TypeScript, JavaScript, CSS, Tailwind, Next.js, Firebase, GSAP, OpenAI*

- Developed a unique stock prediction system that fuses real-time social sentiment (Twitter, Reddit, Google Trends) with financial indicators (RSI, moving averages, trading volume), improving prediction accuracy by **45%**.
- Implemented an **AI-driven analytics engine** using **OpenAI's LLMs** and financial reasoning algorithms to analyze sentiment-price correlations, increasing signal reliability by **50%**. Integrated a multi-source data pipeline with Yahoo Finance API and Alpha Vantage to track market psychology alongside price trends.
- Built an interactive **Next.js** dashboard displaying real-time stock trends, sentiment heatmaps, confidence scores, and **AI-driven trade** recommendations, enhancing user engagement by **60%**. Integrated **Clerk Auth** for user management.

Mood Atlas: AI Place Finder ↗ | *JavaScript, CSS, Python, Java, React, Next.js, Flask, Spring Boot, SQL, GCP, OpenAI*

- Developed a **React** and **Next.js** frontend with **Google Maps API** to display personalized mood-based destination recommendations, allowing users to add location preferences for a more personalized experience.
- Integrated a **Python AI backend** using **Flask** and **OpenAI's LLM** for generating suggestions. Leveraged **Google Places API** alongside a custom algorithmic engine to fetch locations increasing the number of places fetched by **500%** and improving recommendation accuracy by **40%** based on user mood analysis.
- Implemented a **Java Spring Boot backend** along with **SQL** for user data management and storing user favourites. Utilized **Postman** for API-driven data transfer to the **SQL database**, reducing API response time by **25%**.

Neural Network Circuit Optimizer ↗ | *Python, C++, TensorFlow, PyTorch, Scikit Learn, Pandas, Pytest, SQLAlchemy*

- Developed an **AI-based tool** to optimize digital circuits using **machine learning** algorithms, **neural networks**, and circuit simulation, improving efficiency and performance by up to **35%**. Built using my own custom circuit simulator.
- Implemented a **neural network** with **machine learning** frameworks for optimizing circuit efficiency by reducing component count, power consumption, and execution time achieving a **30%** reduction in circuit execution time.
- Visualized optimization results using **Matplotlib**, and integrated **SQLAlchemy** to store, query, and track circuit data, enabling easy analysis and performance evaluation. Used **Pandas** for **data analysis** and **Pytest** for **unit testing**.

Non-Technical Experience

Summer Camp Program Assistant | *The Leacock Foundation, Toronto, Canada*   *July 2023-Aug 2023*

- Worked full-time as a Program Assistant at a children's summer camp, overseeing daily activities, managing supplies, coordinating with teachers, and ensuring smooth camp operations.
- Developed strong communication skills by interacting with children, parents, and staff.

Math Camp Program Assistant | *The Leacock Foundation, Toronto, Canada*   *March 2023*

- Worked as a program assistant at a Math March Camp, managing attendance, communicating with parents, and helping the camp director plan. Assisted teachers by preparing materials and providing support during lessons.
- Regularly interacted with children to foster a positive and engaging learning environment. Enhanced my organizational and communication skills while contributing to the success of the camp's educational programs.