# HAIDER MALIK

## Toronto, Canada

(C) +1-647-804-2549

haidermalik662@gmail.com

Portfolio

**™**LinkedIn

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# **Profile Summary**

- 2nd-year Software Engineering student at York University with a strong foundation in programming.
- Proficient in Python, Java, and JavaScript, with experience in frameworks like React, Spring Boot, Flask and .NET.
- Skilled in machine learning with TensorFlow, PyTorch, and Scikit Learn, developing innovative AI-powered tools.
- Strong communication and collaboration skills honed through technical and non-technical roles.

# **Education**

York University Expected Graduation Date: April 2027

BEng in Software Engineering (Specialization in Big Data)

Toronto, Canada

#### **Relevant Coursework**

Intro and Advanced OOP

Data Structures

Computer Organization

Embedded Systems

• Software Development Project

• 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, Spring Boot, .NET, Kubernetes, Docker,

AWS, Google Cloud, REST API, TensorFlow, PyTorch, Scikit Learn, Pandas, NumPy, Matplotlib, Streamlit

Databases: SQL, PostgreSQL, SQLAlchemy, MongoDB, Google Firebase, Chroma DB, Oracle

## **Projects**

Neural Network Circuit Optimizer | Python, TensorFlow, PyTorch, Scikit Learn, Pandas, Matplotlib, 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%**.
- Implemented a **neural network** 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 manipulation and analysis**, and **Pytest** for **unit testing** to ensure the reliability of the optimization process.

Mood Atlas: AI Place Finder | JavaScript, CSS, Python, Java, React, Next. is, Flask, Spring Boot, SOL, Google Cloud, 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**, **OpenAI's LLM** for generating suggestions and **Google Places API** for location data, enhancing recommendation accuracy by 40% based on user mood analysis.
- Implemented a Java Spring Boot backend along with SQL for user management and storing user favourites. Utilized Postman for API-driven data transfer to the SQL database, reducing API response time by 25%.

Supa Charge App For EVs | JavaScript, TypeScript, C++, Swift, React Native, Google Cloud, Firebase, Clerk Auth

- Developed *Supa Charge*, a **full-stack app** for finding EV chargers, made using **react native** it has an impressive UI along with **Google Maps integration**, filtering options, and real-time updates on available chargers.
- Integrated Clerk for user authentication, allowing account management, insights, and linking user data like favourities to their profiles, reducing login time by 20%.
- Utilized Google Maps and Places API for location search and charger info, with Firebase securely storing user data, ensuring real-time updates with a 30% improvement in data synchronization speed.

#### **Non-Technical Experience**

Program Assistant | The Leacock Foundation, Toronto, Canada

June 2022-Aug 2023

- Worked full-time and part-time at 3 different Childers camps in my community throughout the year as a program assistant. These included summer camps, Saturday camps and math camps.
- Developed strong **communication skills** by interacting with children, parents, and staff, while also enhancing my **professionalism** in diverse **educational and recreational environments.**