



# Samia Anwar

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## EDUCATION

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### • McMaster University

Software and Biomedical Engineering, BEng. BME.

Graduated November 2024

Hamilton, ON

- Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming (Java), Operating Systems (C), Networks, Concurrency, Databases (SQL)

## TECHNICAL SKILLS

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**Languages:** Python, JavaScript, Java | **Front-end:** React, Vue, Flutter, Next.js, TypeScript, TailwindCSS

**Back-end:** Flask, Node.js, PostgreSQL, GraphQL | **Deployment:** Amazon Web Services (AWS), Google Cloud Platform (GCP), Docker

## EXPERIENCE

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### • Healthcare Systems R&A

Software Engineering Research Assistant

May 2022 - Aug 2022

Remote

- Developed a key-point detection algorithm with 85% accuracy using Python, TensorFlow and OpenCV
- Annotated 600+ images for training and testing to improve model accuracy by 15% using JSON files
- Presented findings at bi-weekly company-wide meetings, with 50+ attendees
- Authored maintainable documentation to support onboarding three developer teams

### • FyeLabs

Software Developer Intern

May 2020 - Aug 2020

Hamilton, ON

- Built a cross-platform mobile app with Flutter for campus entry tracking with 500+ faculty users
- Produced an internal Vue.js-based deals pipeline improving customer intake efficiency by 200%
- Designed and implemented API integrations into each project

### • Llettona Foundation

Project Manager

April 2020 - July 2021

Remote

- Co-led a team of 5 to complete data-wrangling tasks to build a classification model for infant facial patterns resulting in a co-author attribution in a published scholarly journal
- Trained a classification model using the fast.ai library to predict the outcome of in-person and online psychiatric therapy with 80% accuracy

## PROJECTS

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### • Trading Simulator: A Stock Market Predictor with Live Trading Simulation

Tools: React.js, TailwindCSS, Flask, scikit-learn, PostgreSQL, Google Cloud Run, Docker

Dec 2024 - Feb 2025



- Leveraged stock market data to create an algorithm informed by custom random forest regressor to simulate daily trading decisions
- Formulated scalable REST APIs in Flask to implement a daily trading and a back-testing framework
- Deployed a visualization of live daily results using Google Cloud Run and Docker containerization

### • MyHealthPal: An Appointment and Vaccine Tracking App for Families

Tools: React.js, Node.js, AWS, GraphQL

Sept 2023 - Apr 2024

- Designed a novel data authorization protocol enforced by Cognito and a DynamoDB database schema
- Connected the React front-end through API integration using AWS SDK and Node.js
- Developed a user testing framework with a 50% increase in satisfaction between first and final iterations

### • matisse: An npm library to convert between colour spaces

Tools: JavaScript, npm, JUnit

Jan 2022 - Apr 2022



- Created an npm library to digitally manipulate colours with support for 5 colour spaces
- Evaluated for colour translation correctness using JUnit for automating custom test cases