

Arya Patel

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EDUCATION

University of Waterloo

Bachelor of Computer Science and Finance

Waterloo, ON

2023 - 2027

TECHNICAL SKILLS

Languages: Python, Java, C++, SQL, JavaScript, TypeScript, HTML, CSS, Bash

Frameworks: Node.js, Flask, GraphQL, Next.js, React, TensorFlow, PyTorch, Jest, Cypress, Three.js

Tools: MySQL, PostgreSQL, Docker, Kubernetes, AWS (RDS, S3), GCP, Jupyter Notebook

EXPERIENCE

MPAC

May 2024 - Aug. 2024

Software Engineer Intern

- Optimized MPAC's Geo-spatial **Convolutional Neural Network**, enhancing classification accuracy by **16%**
- Assisted in developing internal **RAG LLMs**, integrating 4+ models and reducing response times by **0.5** seconds
- Implemented **AWS SQS** queue and custom endpoints to automate malicious content checks in LLM responses

Hack The North

Jan. 2024 - Present

Software Engineer Intern

- Upgraded sponsorship dashboard to use Blueprint.js V5, optimizing load times and by data rendering by **34%**
- Implemented a **responsive** design on the dashboard table, allowing seamless usability across **10+** device types
- Built an automated reminder system, securing **\$500,000+** in sponsorship and reducing manual workload by **20%**

Guardian

Sept. 2023 - Feb. 2024

Software Engineer Intern

- Developed and implemented appointment scheduling and health tracking features, used by **600+** monthly users
- Achieved a **4.76/5** patient satisfaction rating in appointment scheduling, a **28%** increase from previous years
- Improved app security protocols by automating regular vulnerability assessments using **AES-256 encryption**

JPMorgan Chase & Co.

July 2023 - Aug. 2023

Software Engineering Intern Experience

- Built an adaptive internal system equity screener tool using Python and TensorFlow, utilizing **LSTM** networks
- Streamlined the financial data analysis workflows using **Apache Spark** and **AWS**, boosting efficiency by **20%**
- Utilized **Jest** to develop and integrate a robust testing suite, for ensure test-driven development and functionality

PROJECTS

Echo | Hume AI, React, Node.js, JavaScript, TypeScript

- Developed a **real-time sentiment analysis** application for **reminiscence therapy** within dementia patients
- Outperformed industry benchmarks with a **25%** improvement in mood prediction accuracy within patient trials
- Implemented the **Hume AI API** to determine voice intonation and movement, for nuanced emotional analysis

Robo-Advisor | Python, Pandas, NumPy, Matplotlib, Git

- A **quantitative analysis script** predicting the least volatile portfolio from a set of arbitrary user-provided stocks
- Implemented **multi-threading**, queues and recursion to reduce request runtime from **RESTful APIs** by **53%**
- Consistently generated portfolios with **over 40% less volatility** when compared to the S&P500 and NASDAQ

Promptopia | JavaScript, TypeScript, Next.js, HTML/CSS, Git

- Developed a full-stack **CRUD** application using Next.js, utilizing **React Hooks** and **GraphQL** to streamline UX
- Achieved a **20%** reduction in page load times through **code refactoring**, allowing for exceptional app scalability
- Integrated an **OOP-based** framework utilizing **Java** and **SQL** for secure user data storage and retrieval processes

Movieland | JavaScript, React, OMDb API, HTML/CSS

- Reverse-engineered** the Netflix homepage to create a **React-based** clone with searchable movies and TV shows
- Featured **IMDb ratings**, enabling users to see public ratings for enhanced decision-making and user engagement