Arya Patel

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EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Computer Science and Finance   *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
- Pushed several **React** and **TypeScript** components into JPMorgan open source software for company wide use
- Created comprehensive test suites using **Jest** and **Mocha & Chai** to reduce intermittent security issues by **35%**

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, utlizing **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