

Arya Patel

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EDUCATION

University of Waterloo

Waterloo, ON

Candidate for Bachelor of Computer Science & Finance, Double major - CFM

GPA: 3.9

- Courses: Introduction to Financial Markets and Data Analytics & Foundations for Financial Reporting

SKILLS

Languages: Python, C#, Java, JavaScript, C, Typescript, HTML, CSS, \LaTeX , Racket

Frameworks/Tools: Git, React, Node.js, Flask, Bootstrap, Figma, MySQL, AWS, VS Code

Soft Skills: Communication Skills, Analytical Thinking, Adaptability, Negotiation Skills and Problem Solving

PROJECTS

ECHO | *Hume AI, React, Node.js, JavaScript, TypeScript*

- Developed a **real-time sentimental analysis** application to do **reminiscence therapy** for dementia patients
- Achieved a **25%** improvement in mood prediction accuracy compared to start-up industry benchmarks
- Implemented **HUME AI** technology to analyze voice intonation, body language, and movement.
- Resulted in a **30%** reduction in instances of agitation and improved overall well-being in pilot study participants
- Published a white-paper on ECHO's methodology, to emphasize the ability to leveraging AI for dementia care.

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

- A **full-stack CRUD** based Next.js application, coupled with **React Hooks** and **GraphQL** technologies
- Achieved a **20% reduction** in page load times through **code refactoring**, allowing for exceptional scalability
- Architect and built an **OOP**-based framework, and utilized **MongoDB** to securely store and retrieve user data
- Employed **CSS and JavaScript minification** to optimize loading times and overall website performance **by 4%**

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

- A **quantitative analysis script** that generates the least volatile portfolio given arbitrary stocks
- Implemented **multi-threading**, **queues** and recursion to reduce request runtime from **RESTful APIs** by **50%**
- Consistently generated a portfolio with **over 40% less volatility** compared to the S&P500 and NASDAQ
- Integrated a **five-hundred thousand iteration** Monte Carlo simulation that runs in **15 seconds** or less

EXPERIENCE

UW Blueprint

December 2023 - Present

Software Developer

- Reduced processing time by **40%**, enabling quicker turnaround for incoming applicants and company sponsors.
- Achieved a **50%** increase in user adoption within the first six months after my frontend implementation
- Utilized cost-effective solutions, for a **25%** reduction in administrative costs for non-profit partners after handover

JPMorgan Chase & Co.

March 2022 - September 2022

Software Engineering Virtual Experience - Remote/Online

- Built a robust internal system tool utilizing **Python** scripts utilized to analyze stock price data feeds and reports
- Successfully pushed **React** and **TypeScript** components into Perspective, a JPMorgan **open source** software
- Created comprehensive test suites using Mocha and Chai to reduce intermittent issues by **35%**

ACHIEVEMENTS AND CERTIFICATES

Certified Fund Raising Executive (CFRE) - Associate

Brampton, ON — August 2022

BigQuery for Machine Learning

Toronto, ON — December 2019

DECA ICDC (8th out of 26000)

Orlando, FL — May 2023