

Om Patel

Portfolio: <https://ompatelgithub.github.io/personal-portfolio/>

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EDUCATION

University of Toronto

Toronto, ON

Bachelor of Science with Specialist (Major) in Computer Science, GPA: 3.7, Dean's List Scholar


Sept 2021 - May 2025

Courses: Algorithms and Data Structures, Software Design, Theory of Computation, Operating Systems, Web Programming, Machine Learning, Multivariable Calculus, Linear Algebra, Probability and Statistics

WORK EXPERIENCE

Amazon

Toronto, ON

Software Developer Intern - Amazon Robotics | 

May 2024 - Current

- Utilized **AWS Lambda**, **Step Functions**, and **Java** to create service that enables floor managers around the globe to optimally utilize stowers.
- Reduced **AWS Lambda** handler size for internal authentication service by **43%** using Go binary and custom **AWS AL2** cloud compute environment, lowering cold start times and costs.
- Coordinated deployment packages and pipelines for **12 microservices** to maintain consistent versions across distributed systems.
- Used **TypeScript** and **SQL** to create data pipeline that services **12,000+** users and **180** fulfillment centers daily.

Groupe Canam

Toronto, ON



Software Consultant | 

May 2023 - Aug 2023

- Designed and implemented a **full-stack enterprise resource planning (ERP) system** and **Unity-based visualizer** for Groupe Canam to track steel joist production, current/upcoming orders and their positions within the yard using **Python** and **SQL**.
- Decreased monthly expenditure by **\$46,000** through the use of **ERP system** by reducing need for an external yard rental.



TECHNICAL PROJECTS

Computer Vision based Virtual Steering Wheel

Windows/Mac Application |  

- Designed software that allows users to control a vehicle in a video game using hand gestures at a rate of **60 FPS** with **Python**, **Google's MediaPipe framework**, **PyGame API**, and the **CV2 library**.
- Enhanced performance on **less powerful hardware** by **34%** through the effective utilization of **threading** and **thread synchronization techniques**, showcasing proficiency in optimizing resource usage.

AI Trainer and Macro Tracker

iOS Application |  

- Developed an **iOS app** using **Swift** that empowers users to track nutritional intake (protein, calorie, fat, carbs) for improved health awareness.
- Incorporated the **Charts library** to transform data into visually insightful charts, enhancing progress tracking and enabling users to make informed decisions based on data-driven insights.
- Implemented an **AI Trainer feature** using **Swift** and the **PoseNet AI model** to enhance user exercise form by an average of **26%** (measured from ideal form baseline).

Quantative Trading Algorithm

Full Stack Application

- Co-founded a **startup** that utilizes **PyTorch**, **Python**, and **C++** to develop **recurrent neural networks** that **predict equity/commodity prices** and the corresponding option metrics such as **delta**, **gamma**, and **IV**.
- Delivered a P&L of **11%** on **S&P 500 ETF (\$SPY) options** by leveraging custom **machine learning** models along with complex statistical modeling.

SKILLS SUMMARY

Languages: Java, Python, C, C++, C#, Swift, JavaScript, HTML/CSS, MySQL, Bash, LaTeX, Assembly (RISC-V)

Developer Tools: Git/GitHub, Amazon AWS, Microsoft Azure, Linux, VS Code, Unity

Libraries/Frameworks: Node.js, React.js, Django, TensorFlow, Pytorch, MediaPipe, JavaFX, Firebase