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: 4.0, 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*

WORK EXPERIENCE

Groupe Canam   Toronto, ON

Software Consultant   *Feb 2023 - Present*

- Developed and implemented a full stack application using React, Node.js, SQL, and C#, resulting in streamlined workflows, automated processes, and substantial monthly cost savings of $15,000
- Collaborated closely with the client to gather requirements, design customized software solutions, and provide comprehensive training and support, resulting in increased operational efficiency, optimized 3D modeling, and data-driven decision-making capabilities

Delta Force Capital   Toronto, ON

Co-founder   *Oct 2022 - Present*

- Co-founded startup that uses PyTorch to develop several models using recurrent neural networks to predict equity/commodity prices and option metrics such as delta, rho, and vega
- Optimized options investments by using custom models and the Bjerksund-Stensland model along with complex financial data and statistical analysis to deliver actionable insights regarding S&P 500 ETF ($SPY) options

Arlite Technology   San Francisco, CA

Software Engineering Intern   *May 2022 - Sep 2022*

- Designed and implemented cloud-based solutions using Microsoft Azure and Amazon AWS to improve scalability and reliability of web applications
- Built RESTful APIs with Node.js and Express for seamless communication between front-end and back-end systems
- Worked with databases such as MySQL and PostgreSQL to design and optimize database schema and queries for large-scale applications
- Used DevOps tools like Jenkins and Docker to automate builds, tests, and deployments, ensuring fast and reliable releases to production

TECHNICAL PROJECTS

Computer Vision based Virtual Steering Wheel

Personal Project

- Used Google's MediaPipe framework, PyGame API, and the CV2 library to implement a program that allows the user to control a vehicle in a video game with their hand gestures at a rate of 60 fps
- Made use of threading and thread synchronization techniques to optimize performance for weaker hardware
- Used the same technologies to implement a visualizer that allows the user to upload a video of themselves and receive a video that illustrates the ML model's interpretation of their hand placement on screen

Boggle Game

School Project

- Collaborated in a team and used UML/JavaFX to design and implement a game of Boggle that provides accessibility features such as a contrast/colorblind mode, a braille interface, and a screen reader
- Used SOLID principles and object oriented programming techniques such as polymorphism, inheritance, and abstraction to write code that is readable, scalable, and easily maintainable

SKILLS SUMMARY

- **Languages**: Java, Python, C, C++, C#, JavaScript, Typescript, MySQL, PostgreSQL, Bash, HTML/CSS, LaTeX, Assembly
- **Developer Tools**: Git/GitHub, Docker, Jenkins, Amazon AWS, Microsoft Azure, Linux, VS Code, Unity
- **Libraries/Frameworks**: Node.js, Vue.js, React.js, Express, Django, PyGame, CV2, MediaPipe, JavaFX