Vasu Patel

[LinkedIn](#) | [GitHub](#) | [Website](#)

EDUCATION

Bachelor of Engineering - Computer Engineering   **Sept 2020 – Apr 2025**
Toronto Metropolitan University (formerly Ryerson University)   *Toronto, ON*

- CGPA: 4.08 / 4.33
- Relevant Courses: Digital Systems, Software Systems, Data Structures and Algorithms, Database Systems 1, Object-Oriented Eng Analysis and Design, Operating Systems and Software Architecture.

WORK EXPERIENCE

Environment and Climate Change Canada   **Toronto, ON**
Software Developer Intern   *May 2023 – present*

- Designed and implemented Java components using an internal framework to replace existing components and achieved a 15%-time improvement when decoding incoming data.
- Implemented and refactored frontend components, delivered new features, and fixed bugs using Angular which resulted in a 7%-increase in website performance.
- Utilized NgRx and RxJS to implement state management and efficient handling of asynchronous operations to improve performance and minimize bugs.
- Developed 50+ test cases for new components in Junit and Karma to perform component testing.
- Participated in 20+ code reviews to ensure maintainability, scalability and code quality.

Cybersecurity Research Lab at Toronto Metropolitan University   **Toronto, ON**
Junior Machine Learning Developer   *Sept 2022 – Apr 2023*

- Developed preprocessing pipeline for data cleaning, leading to a 20% increase in data accuracy for ML algorithms using NLTK and Spacy.
- Conducted extensive literature review and research into data collection and data analysis methodologies.
- Implemented 10+ text mining scripts using Python in Jupyter Notebook, Pandas and NumPy.
- Developed modular, scalable, and flexible codebase for future development and different analysis pipelines.

Toronto MetRobotics at Toronto Metropolitan University   **Toronto, ON**
Software Controls Member   *Oct 2021 – Apr 2023*

- Developed a distance mapping and AR tag detection system using python to improve detection time.
- Utilized the computer vision package OpenCV and machine learning algorithm to achieve 95% accuracy.

PROJECT EXPERIENCE

[**Movie Review Website**](#): **Java, Servlet, Docker, Kubernetes, MySQL, Google Cloud**   *2023*

- Developed a movie review and recommendation website using Java, JSP and servlet and deployed using Docker and Kubernetes on Google Cloud Platform.
- Designed the website using microservice and n-tier based architecture using REST APIs.
- Utilized MySQL database to store movies and user data and authenticate user login using JWT.

[**Indeed Scraper**](#): **React, Python, Flask, Material UI**   *2022*

- Full stack website designed to automate job searching process and apply to applicable job listings.
- Implemented frontend using React and Material-UI and is used to take in user input and display data.
- Developed a custom REST API using flask in python to perform data scraping based on user parameters.

[**Bookstore Application**](#) (**OOP**): **Java, MySQL**   *2022*

- Worked in an Agile team of 4 to develop app by leveraging object-oriented design patterns and testing.
- Implemented a state design pattern to the application based on user role for scaling in future.
- Implemented and administered a local MySQL database server to store customer and books information.

TECHNICAL SKILLS

- Languages: Java, JavaScript, Python, TypeScript, SQL, C, HTML, CSS, and VHDL
- Frameworks: Angular, Node.js, React, Express.js, Flask
- Developer Tools: Git, GitLab, Docker, Google Cloud Platform, and Kubernetes