

# Harsh Patel

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## Education

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|---|-------------------------------|-----------------------------|
| <b>Bachelor of Software Engineering</b>   | <b>University of Victoria</b> | <b>Sept 2019 - Aug 2025</b> |
| <ul style="list-style-type: none"><li>• GPA: 3.27 / 4.00</li><li>• Relevant Courses: Data Mining, Data Pattern and Recognition, Artificial Intelligence, and Massive Datasets</li></ul> |                               |                             |

## Technical Skills

- **Languages:** Python, Java, C, C++, SQL, R, MATLAB, JavaScript, HTML, CSS
- **Frameworks:** Selenium, Flask, Vue.js, Node.js, Express.js, PyQt5, Matplotlib, TensorFlow, Pandas, PySpark
- **Tools:** Copilot, Microsoft 365, PowerShell, Terraform, Teams, Jira Service Management, Android Studio, Linux
- **Database & Cloud:** SQLite, PostgreSQL, MySQL, AWS, Azure

## Experience

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|--|----------------------------------|----------------------------|
| <b>Python Developer Co-op</b>  | <b>Solaires Entreprises Inc.</b> | <b>Jan 2025 - Aug 2025</b> |
| <ul style="list-style-type: none"><li>• Designed and implemented a state machine in a standalone PyQt5 application to dynamically render up to 14 boxplots using Matplotlib, based on any combination of 7 interactive checkboxes.</li><li>• Updated the local standalone PyQt5 software by adding experiment-specific checkboxes, modifying the database schema, integrating a calendar widget, and enhancing the UI with additional labels, buttons, and functionalities.</li><li>• Created Flask middleware with 10+ API routes to facilitate seamless communication between the Vue.js frontend and the Node.js backend.</li><li>• Built a secure Vue.js login page using HTTP-only cookies for session validation, added logout and frontend inactivity timeout features, and created a swimlane diagram illustrating the JWT authentication logic.</li></ul> |                                  |                            |

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| <b>Software Engineer Intern</b>  | <b>Clutch Canada</b> | <b>Jan 2022 - Aug 2022</b> |
| <ul style="list-style-type: none"><li>• Developed a docker compatible scraper to gather data from Autotrader for business executives to make decisions on pricing and demand of the vehicle, preventing 80% of errors generated from connection issues.</li><li>• Executed scraper inside docker container (automated with Airflow DAG) by structuring ECS Fargate cluster and ECR repository, resulting in the reduction of scraper runtime by 30%.</li><li>• Initiated and designed software, integrated with Airflow, that converts unstructured PDF files to CSV to analyze vehicle data, decreasing 80% of time spent on the evaluation of each PDF file.</li><li>• Enhanced data protection by encrypting 100% of customer private information stored in the database.</li><li>• Collaborated with the IT team to ensure proper account creation and deletion following IT best practices.</li><li>• Implemented thorough unit testing, achieving over 60% coverage, leading to a more robust and reliable program.</li><li>• Guided a colleague in designing a data engineering pipeline for a new scraper and hosting it on AWS.</li><li>• Worked with the data team to obtain appropriate permissions for AWS service usage, ensuring secure and compliant access management.</li></ul> |                      |                            |

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| <b>Software Developer Intern</b>   | <b>Curbie Cars</b> | <b>Sept 2021 - Jan 2022</b> |
| <ul style="list-style-type: none"><li>• Redesigned the data gathering process for CBB API using asynchronous and multi-threading algorithms in Python to develop machine learning models for vehicle price prediction, improving script runtime by 300%.</li><li>• Collected visitor's data from Matomo API using Amazon Lambda for the marketing team to understand customer needs, resulting in 20% higher website traffic and improved customer service.</li><li>• Presented a comprehensive 50-slide solution to the CTO outlining the process for identifying visitors on the website using Matomo.</li></ul> |                    |                             |

## Projects

### VikesPlace

- Engineered robust backend for a web application that mirrors the functionality of Facebook Marketplace.
- Enhanced backend of microservices with unit testing to ensure robust functionality and performance consistency.
- Constructed a resilient data layer in the backend to ensure 0% data corruption by requiring all API calls to pass through this layer before interacting with the database.