

Prem Patel

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EDUCATION

University of Waterloo

Waterloo, ON

Honours Bachelor of Computer Science (BCS)

Sep. 2021 – Aug. 2026

- GPA: 3.8; Coursework: Data Structures, Algorithms, Object-Oriented Programming, Operating Systems, Databases, Computer Architecture, Functional Programming, Machine Learning, AI

Wilfrid Laurier University

Waterloo, ON

Honours Bachelor of Business Administration (BBA)

Sep. 2021 – Aug. 2026

- Awarded President's Gold Scholarship (\$4,000) for academic excellence

EXPERIENCE

Software Developer Intern

Jan. 2025 – Dec. 2025

Kinaxis

Ottawa, ON

- Contributed across **server (C++)**, **application (JavaScript)**, and **agent/worker service layers (Node.js/TypeScript, Java)**, enabling enterprise clients to reliably run/debug **embedded algorithms** and create constraint-based **optimization models** in supply chain planning
- Designed **guardrails** in **server** and **optimizer** layers to prevent **resource overuse**, improving **stability** during large-scale runs; resolved **lock contention** and built a new **logger** to improve **compute visibility**
- Extended **Jenkins AFT pipelines** with **unit**, **integration**, and **end-to-end tests**; built a configurable **C# performance testing framework** to simulate diverse workloads and identify bottlenecks
- Took initiative to showcase **features** and **design outcomes** in **10+ cross-team demos**, working as one of a few active developers in a small, fast-paced **Kanban** team with shifting priorities
- Recognized by a senior developer for consistently **detailed pull requests** and design explanations, improving team understanding and streamlining code reviews

Software Engineer Intern

Jan. 2024 – May. 2024

AutoTrader

Toronto, ON

- Developed and optimized **Python microservices** across **30+ automotive brands**, leveraging **Pandas** and a **REST API** to accelerate OEM data processing by **8x** for partners like Toyota and BMW
- Engineered **Azure pipelines** in **Python** to automatically generate and deliver monthly performance reports to **150+ dealerships**, querying data from **Redash** and managing reporting for select dealer groups
- Optimized **data processing algorithms** with the **Tabula** library, reducing manual effort, saving hours each month, and increasing data accuracy by up to **85%**
- Led new hire **training**, mentoring a new full-time employee and interns, and improved team onboarding by promoting clear communication through effective **documentation** and **version control**

PROJECTS

NBA Analytics Dashboard (Full-Stack Web App) 🌐

May 2025 – Jul 2025

- Built a **full-stack Analytics Dashboard** using **React**, **Flask (Python)**, and **PostgreSQL** to visualize NBA player and team performance.
- Designed and optimized **SQL queries**, **materialized views**, and **indices** to support scalable retrieval
- Implemented **role-based authentication** and **triggers** for secure data management and audit logging

Barber Review Mobile App (Android/Kotlin) 🌐

Sep 2024 – Dec 2024

- Developed an **Android mobile app** using **Kotlin**, **Compose UI**, and **MVVM architecture** to connect with barbers based on user-centric traits such as sociability and hairstyle specialty
- Integrated the **Google Places API** for barbershop data, along with **Firebase authentication** and **cloud database storage** for secure, scalable data management
- Followed **Scrum sprints** and documented **user stories**, using **GitLab** for version control and feature tracking

TECHNICAL SKILLS

Languages: C++, Python, Java, C#, JavaScript, TypeScript, HTML/CSS, SQL, Kotlin, Swift, Bash, R

Developer Tools: Git, Visual Studio, VS Code, Node.js, Jest, Yarn, Maven, Jenkins, Docker, Helm, GCP, Azure, AWS

Frameworks & Libraries: .NET, React, Spring, Jest, Flutter, Flask, Firebase, Pandas, NumPy, PyTorch, Matplotlib