

Ved Patel

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EDUCATION

Honours Bachelor of Science in Computer Science | Expected April 2027

Ontario Tech University | Oshawa, ON

- **Cumulative GPA:** 3.97/4.3
- **Honours:** President's List (2023-2025), Dean's List (Fall 2025)
- **Relevant Coursework:** Analysis and Design of Algorithms, Systems Programming, Computer Graphics and Visualization, Database Systems and Concepts

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C++, SQL, HTML/CSS.
- **Web and AI:** Flask, API Integration, Gradio, RAG Architectures, LangChain, LLM's, Numpy, Pandas, Scikit-learn.
- **Developer Tools:** Git, GitHub, VS Code, IntelliJ IDEA, Linux, Agile
- **Core Concepts:** Data Structures, Algorithms, Object-Oriented Programming (OOP), SDLC, Interpolation, Root Finding

PROJECTS

Smart Document Assistant (IBM Capstone) | Watsonx.ai, LangChain, ChromaDB | 2026

- **Engineered** a **Retrieval-Augmented Generation (RAG)** pipeline using **LangChain** and **Granite-3.2-8b-instruct** for automated knowledge extraction.
- **Orchestrated** a document ingestion pipeline using **LangChain** to split PDF text into 1000-character chunks with (100-character overlap) for optimal context retention.
- **Implemented** semantic search using **IBM Slate-125m embeddings** and **ChromaDB** vector storage to retrieve high-relevance document sections.
- **Deployed** a user-friendly frontend with **Gradio**, enabling real-time PDF ingestion and interactive Q&A sessions.

Polyglot Tutor (HackHive 2026) | Python, Flask, OpenAI API | Jan 2026

- **Architected** the backend for an AI-driven language learning platform that generates lessons in 18 languages via **LLM** orchestration.
- **Leveraged** AI-assisted engineering workflows and **Prompt Engineering** to accelerate the development lifecycle, delivering a functional MVP within a 36-hour sprint.
- **Integrated** external REST APIs to facilitate real-time feedback loops, demonstrating proficiency in **API-driven development**.

Electronic Arts Software Engineering Job Simulation | C++, UML, Git | Oct 2025

- Completed a job simulation on **Forage**, developed by the **EA Sports College Football** team, utilizing **C++** for feature implementation.
- **Designed** a feature proposal and technical class diagram to model object relationships and inheritance.
- **Optimized** game codebase identifying memory inefficiencies and implementing improved data structures.

CERTIFICATES

- **IBM Generative AI Engineering Professional Certificate** (Coursera/IBM) - 2026