Ved Patel

vedmpatel2005@gmail.com | (647) 771-7973 | Scarborough, ON |
linkedin.com/in/ved-patel-cs/

EDUCATION

Ontario Tech University | Oshawa, ON Honours Bachelor of Science in Computer Science | Expected April 2027

- **GPA:** 3.97/4.3 (President's List x 4, Dean's List x 1)
- **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) | Python, Watsonx.ai, LangChain, ChromaDB

- Built an enterprise-grade **Retrieval-Augmented Generation (RAG)** application as the final capstone project for the IBM Generative AI Engineering Certificate.
- Orchestrated a document ingestion pipeline using **LangChain** to split PDF text into 1000-character chunks with (100-character overlap) for optimal context retention.
- Integrated **IBM Watsonx.ai** to leverage the **Granite-3.2-8b-instruct** LLM, tuning temperature parameters (0.5) to balance factual accuracy with natural language generation
- 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 (Web Interface)**, to enable real-time PDF upload and interactive Q and A sessions.

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.

Diabetes Risk Factor Analysis | Python, Pandas, Matplotlib | Nov 2024

- Analyzed health dataset to quantify correlations between hypertension, glucose levels, and diabetes risk.
- Leveraged **Pandas** for data cleaning and **Matplotlib** to visualize trends and identify risk thresholds

CERTIFICATES / ACHIEVEMENTS

- **In-Course Scholarship** (Ontario Tech University) – Awarded for outstanding academic achievement (2024-2025)
- **IBM Generative AI Engineering Professional Certificate** (Coursera/IBM)