

Henil Patel

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EDUCATION

Bachelor of Computer Science Honours – Major: Big Data & Analytics **GPA: 3.65/4.0**

Conestoga College, Waterloo, ON Coursework: Software Architecture, AI/ML, Databases, Enterprise Dev, SDLC, Distributed Systems

TECHNICAL SKILLS

Languages: Python, C++, TypeScript, C# (.NET), Java, Node.js, SQL

Cloud & DevOps: AWS (EKS, Lambda, S3, API Gateway, CloudWatch), Docker, Linux, Azure DevOps, GitHub Actions, CI/CD

Data Systems & APIs: RESTful APIs, Microservices, PostgreSQL, MSSQL, MongoDB, ETL Pipelines

Frontend: React.js, Next.js, HTML/CSS, Tailwind CSS

Machine Learning: PyTorch, Pandas, NumPy, Scikit-learn, NLP, Model Training & Evaluation

Tools & Practices: Git, Agile, Jest, MSTest, Root Cause Analysis, GPT/Claude SDLC, Auditability, Traceability

PROFESSIONAL EXPERIENCE

DATA PIPELINE & SOFTWARE INTERN – SMART Centre Jan 2026 – May 2026 / Jan 2025 – May 2025

- Developed Python pipelines on Raspberry Pi hardware to ingest, clean, and store real-time sensor data, supporting hardware integration and downstream AI/ML.
- Containerized data-monitoring microservices using Docker, isolating environments to ensure 99.9% system uptime.
- Developed GitHub Actions and Jenkins CI/CD workflows with automated code-quality checks and linting to prevent broken builds and improve software delivery.
- Documented system architecture and operating procedures to support cross-functional engineering collaboration.

SOFTWARE DEVELOPER (VR/INTERACTIVE) – SMART Centre Sept 2025 – Dec 2025

- Developed interactive C# and Unity features using modular object-oriented design, collaborating within Agile sprints to deliver software on schedule.
- Profiled memory usage and asset pipelines to diagnose performance bottlenecks and improve real-time rendering on compute-constrained devices.

FULL STACK SOFTWARE DEVELOPER – Harpa Global May 2025 – Sept 2025

- Built full-stack enterprise features with Node.js, TypeScript, REST APIs, and responsive React interfaces, connecting backend services to frontend workflows.
- Integrated a Python NLP microservice, optimizing structured payload serialization to reduce system latency.
- Refactored backend data processing logic with parallel execution and lazy loading, reducing memory usage by 30% under concurrent user loads.
- Troubleshooted production incidents and participated in daily standups, code reviews, and root-cause analysis within a multi-disciplinary Agile team.

SOFTWARE DEVELOPER – Vortex Technology Group May 2024 – Dec 2024

- Built real-time telemetry dashboards to visualize industrial system behavior, monitor performance, and help operators identify anomalies.
- Built robust communication middleware using Modbus TCP/RTU and SNMP protocols to securely capture and persist high-frequency hardware data streams.
- Automated event-driven anomaly alerts to help operators reduce operational delays and system downtime.
- Optimized automated control algorithms using historical data trends, collaborating with peers to improve overall system stability.

PROJECTS

Healthcare EMR Data Integration Engine – Capstone, Magenta Health

Jan 2026 – Aug 2026

Java, Python, REST APIs, SQL, Docker, Azure DevOps

- Architected service-layer REST APIs in Java and Python on an OSCAR/OpenOSP EMR system to securely extract and validate clinical data for local LLM (Ollama3.2, 3b params).
- Developed Azure DevOps CI/CD pipelines integrating Docker builds, automated testing, and deployments to improve software delivery consistency.
- Implemented data validation and audit logging to support clinical data quality, traceability, and healthcare compliance.

Event-Driven Serverless Data Ingestion Pipeline

June 2026

Python, AWS Lambda, API Gateway, S3, CloudWatch, IAM

- Constructed a highly scalable serverless architecture using AWS Lambda and S3 triggers to ingest, sanitize, and validate streaming JSON datasets.
- Configured CloudWatch logging and custom metrics to improve system visibility, automate monitoring and alerting, and accelerate root-cause analysis.
- Implemented IAM roles and secured API endpoints to control service access and support cloud security practices.

De-IdentifAI – Automated Data Pipeline & Inference System

Jan 2026 – Apr 2026

Python, FastAPI, PyTorch, Transformers, Docker, Next.js

- Engineered an automated data pipeline to process 10,000+ sensitive records, utilizing PyTorch models for deterministic, token-level PII classification.
- Deployed the inference engine as a containerized FastAPI microservice on Google Cloud Run, integrating it securely with a responsive Next.js frontend.

SalesSync – Enterprise CRM Application

Jan 2025 – Apr 2025

C#, .NET 9, ASP.NET Core MVC, React, PostgreSQL, MSSQL

- Developed a full-stack application with REST APIs, role-based access control, and React dashboards to connect enterprise workflows with backend services.
- Designed normalized data models in PostgreSQL and MSSQL, optimizing indexes for efficient data access and low-latency SQL queries.
- Built automated MSTest unit test suites to validate service-layer business logic, detect regressions, and support consistent software quality.

Sensor Data Stream & Reliability System

2025

C++, TCP/IP Sockets, Binary Protocol Validation

- Developed a C++ client-server telemetry system over TCP/IP, implementing binary packet serialization and error-checking routines for reliable data exchange.

FREELANCE EXPERIENCE

WEB DEVELOPER – Materials Engineering Consultancy

Jan 2026 – Present

React, TypeScript, Tailwind CSS, REST APIs

- Developing responsive client web applications utilizing component-driven architecture, managing iterative feature rollouts based on direct client feedback.

FULL-STACK DEVELOPER – Cambridge Food Bank

Sept 2025 – Oct 2025

Node.js, React, MongoDB, REST APIs

- Engineered a full-stack inventory management platform to digitize operations, converting complex requirements into automated workflows tracking 5,000+ lbs of stock.

CERTIFICATIONS & PROFESSIONAL ACHIEVEMENTS

HackerRank Certified Software Engineer | HackerRank Problem Solving – Intermediate | AWS Developer Associate (In Progress)

Mississauga Marathon 2026 Finisher (42.2 km) | Olympiad Gold Medalist (International English Olympiad)