

Varun Manojkumar Patel

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EDUCATION

York University — Lassonde School of Engineering

Bachelor of Science (Honours), Computer Science

Toronto, ON

Sep. 2023 – Sep. 2027

- **Coursework:** Data Structures & Algorithms, OOP, Database Systems, Software Design, Systems Analysis, SDLC

EXPERIENCE

Software Developer / AI Data Engineer

Jan. 2026 – Present

Ayvelis AI

Toronto, ON

- Architected and owned a privacy-preserving analytics platform in Python and FastAPI with PostgreSQL, applying differential privacy techniques to population-level data — reducing data exposure surface to zero.
- Designed and deployed agentic AI inference pipelines using LLM-based evaluation loops and N8N orchestration, cutting manual data processing latency by 40% and enabling real-time KPI dashboard delivery.
- Implemented scalable MongoDB data logging with automated validation, CI/CD integration via Git/GitHub, and SDLC-aligned test checkpoints — shipping 3+ production-quality iterations in an Agile environment.
- Optimised cross-functional engineering workflows by introducing structured issue tracking, documentation standards, and sprint-based delivery cadence across a distributed team of 5+ engineers.

Director of Student Life

Sep. 2025 – Present

Enactus York

Toronto, ON

- Grew organisation from 5 to 8+ members while engineering AI-powered outreach automation that managed 15+ concurrent stakeholder relationships and achieved 0 missed follow-ups across 2 competition cycles.
- Led cross-functional team execution that delivered 3 regional award wins and \$6,000 in funding — coordinating competing workstreams, stakeholder communication, and deadline management simultaneously.

PROJECTS

AdminSync AI — LLM Workflow Engine | Python, FastAPI, SQLAlchemy, SQLite, OpenAI API, N8N

2025

- Engineered an LLM-powered task automation engine using OpenAI API and FastAPI that parses natural language inputs into structured execution plans, audit logs, and checkpoint workflows — reducing coordination overhead by 60%.
- Designed RESTful API architecture with SQLAlchemy ORM, automated status propagation, and multi-workstream checkpoint enforcement; applied OOP design patterns for extensibility and maintainability.

Scotia FutureFlex — FinTech Platform | Python, FastAPI, SQLAlchemy, SQLite, JavaScript, REST API

2026

- **Won Best UI/UX Design at Scotiabank CaseHacks 2026** (50+ teams) — architected a mobile-first investment platform with REST API backend, goal-based onboarding, and data pipelines for Gen Z financial engagement.
- Built end-to-end FastAPI services with input validation, PostgreSQL-style record management, and recommendation retrieval — shipped production-quality MVP under a 24-hour hackathon deadline.

Requirements Traceability & Test Validation Tool | Python, FastAPI, SQLAlchemy, REST API, OOP

2025

- Built an enterprise QA traceability platform inspired by DOORS and Polarion — linking requirements, test cases, verification states, and pass-fail evidence with full revision history and SDLC audit trails.
- Applied OOP design principles and SQLAlchemy relational modelling to enable coverage gap detection, structured review workflows, and scalable control-style reporting across complex requirement hierarchies.

CivicFlow Analytics | Python, PostgreSQL, SQL, JavaScript, REST API, Power BI

2025

- Developed a full-stack analytics system with PostgreSQL-backed data pipelines, automated SQL validation layers, and Power BI-style KPI dashboards — simulating production-scale government reporting infrastructure.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C#, C++, C, SQL, HTML/CSS

Frameworks: FastAPI, Flask, REST APIs, SQLAlchemy, Node.js, Express.js, React (learning), Next.js (learning)

Databases: PostgreSQL, MongoDB, SQLite, ORM, data modelling, query optimisation

AI & ML: LLM integration, OpenAI API, agentic AI pipelines, NLP, machine learning concepts, responsible AI

DevOps: Git, GitHub, CI/CD pipelines, Docker (familiar), Linux, Agile, Scrum, Jira, Confluence, Postman

Systems: OOP, data structures, algorithms, SDLC, software QA, systems analysis, scalability design

ACHIEVEMENTS

Best UI/UX Design – Scotiabank CaseHacks 2026 | **3rd Place** (\$500) – COIE Climathon | **3rd Place** (\$300) – Hult Prize | **3 Regional Awards** – Enactus York (\$6,000) | **Head Delegate** – CUSEC Canada 2025