

Devarsh Prajapati

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EXPERIENCE

Automators Lab | AI/ML Intern

May 2025 – Sep 2025

- **Built** a **LangGraph** multi-agent system that automated the proposal workflow — call transcription, insight extraction, drafting, and task routing — cutting turnaround from hours to **under 10 minutes**, with per-node routing across **GPT, Claude, Gemini, and LLaMA** to balance cost and quality.
- **Integrated 10+ external services** (Slack, Jira, Google Drive, CRMs) into AI agents via **custom MCP servers** so they could act on live business data, securing each with **OAuth 2.0** and **AES-256** per-user credential encryption.
- **Built** a **RAG pipeline** so agents could answer reliably over company documents, raising retrieval hit-rate from **61% to 84%** by tuning chunking and top-k against a 50-pair labeled eval set (**OpenAI** embeddings, **Qdrant**).
- **Automated** lead-generation prep with an event-driven **n8n** workflow linking web scrapers, LLM enrichment, and CRM sync, cutting manual outreach work by **~40%**.

PROJECTS

ContextCode [Live demo](#) | [GitHub](#) | *FastAPI, Celery, Tree-sitter, ChromaDB, Next.js*

2026

- **Built** an AI codebase assistant that indexes Python/JS/TS repos with **Tree-sitter**, chunking by function, class, and module so retrieval never splits a function mid-body — verified by substring and no-overlap tests across all three languages.
- **Grounded** every answer in retrieved code with exact **file:line** citations built from the index (never model text), returning honest refusals on weak context and skipping the LLM entirely on empty retrieval (**zero cost and latency**).
- **Scaled** indexing by offloading CPU-bound parsing and embedding to **Celery** workers behind an async **FastAPI**, keeping the API responsive while streaming 7-stage progress over **SSE**, with swappable local-MiniLM or OpenAI embeddings.
- **Deployed** a public demo (**Railway + Vercel**) hardened with Cloudflare Turnstile, **Redis** quotas, and per-IP rate limits, backed by **274 automated tests** (pytest, Vitest, Playwright).

SixRise [Live demo](#) | [GitHub](#) | *FastAPI, TypeScript, Postgres, Redis, Shopify*

2026

- **Built** an AI visibility platform for Shopify stores that measures how often their products are recommended by AI shopping engines vs. competitors, running a closed audit → fix → verify loop scored on a **24-query** buyer-intent panel via **Perplexity Sonar**.
- **Enforced** a hallucination-safe publishing path so no AI-generated claim reaches a live store: **gpt-5-nano** proposes typed candidates (strict Structured Outputs), deterministic code verifies each value exists in the merchant's catalog, and published copy is string-templated.
- **Architected** a two-service Shopify app that isolates merchant credentials from the AI agent — a thin **TypeScript** shell owns OAuth and tokens while the **Python FastAPI + arq** agent fetches short-lived tokens on demand; deployed on **Northflank + Neon + Upstash**.
- **Optimized** the async job model to cut idle infrastructure cost, raising the arq worker poll interval **0.5s → 15s** after calculating the default would exhaust Upstash's **500K-command/month** quota in **~3** idle days.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Java, R

AI/ML: LangGraph, LangChain, RAG, Model Context Protocol (MCP), embeddings, vector search, structured outputs, prompt engineering; OpenAI, Anthropic, Gemini, Perplexity, LLaMA/Ollama

Frameworks & Backend: FastAPI, Next.js, React, Node.js, Celery, arq, Flask, Streamlit

Data & Infra: PostgreSQL, pgvector, Qdrant, ChromaDB, Redis, Docker, Railway, Vercel, Northflank, Google Cloud

Concepts: System Design, Multi-Agent Systems, REST API Design, Distributed Systems, CI/CD

EDUCATION

York University — BSc. Honours in Computer Science

Toronto, ON | Expected Dec 2026

- Relevant Coursework: Machine Learning, Artificial Intelligence, Data Structures & Algorithms, Databases, Operating Systems, Computer Networks, Software Design.