

Sammy Tourani

Toronto, ON | sammytourani@gmail.com | github.com/SammyTourani | linkedin.com/in/sammytourani

EXPERIENCE

Wealthsimple

May 2026 – Present

AI Platform Engineer

Toronto, ON

- Co-led the production rollout of Wealthsimple's autonomous coding-agent platform to **700+ engineers** across **188 repositories**, migrating core services, integrations, bot identity, and live Jira-to-PR workflows.
- Architected Auto-Extend, an activity-driven Kubernetes sandbox lifecycle system that preserved active Claude Code sessions, reclaimed idle compute, and enforced tenant-scoped renewal and termination, **eliminating hard 48-hour session kills**.
- Built production observability for cloud coding agents using OpenTelemetry, Datadog, and Terraform, shipping dashboards, tiered alerts, failure canaries, and boot-time instrumentation that identified provisioning as **81% of launch time**.
- Built and deployed a FastAPI Jira-to-PR webhook service **replacing a third-party integration**, proving behavioural parity across authentication, trigger logic, and generated pull-request output before production cutover.
- Led a security review of third-party MCP and code-intelligence servers, uncovering telemetry that contradicted local-only claims, install-time code execution, and checksum mismatches, driving a **no-go decision**.

AtkinsRéalis

May 2025 – Jan 2026

AI Solutions Architect

Mississauga, ON

- Architected MyTrak, a **secure RAG platform** indexing **700,000+** confidential nuclear-engineering documents for source-grounded research across a high-compliance program.
- Built the end-to-end document ingestion and retrieval pipeline across parsing, metadata extraction, chunking, embedding generation, indexing, and **semantic search**, creating searchable infrastructure for nuclear-engineering workflows.
- Integrated Microsoft Entra ID RBAC into the retrieval layer, enforcing **document-level authorization** at query time and excluding results outside each engineer's access permissions.

PROJECTS

Tripwire: Adversarial evaluator for AI code-optimization agents | *Python, OpenEvolve, PyPI*

- Built a **four-stage evaluator** for AI-generated code that checks visible tests, behavioural invariants, hidden adversarial inputs, and noise-controlled performance before awarding speedup.
- Shipped it as a PyPI CLI and OpenEvolve integration; across 20 labelled candidates in 7 domains, caught **all 13 planted reward hacks**, accepted all 7 valid optimizations, and verified a **200× speedup** on a Python kernel in a Claude-driven optimization run.

Plexus: Tool-dependency graph for AI agents | *TypeScript, Bun, Sigma.js*

- Built and shipped a TypeScript dependency-inference pipeline over **1,296 Composio tools**, deriving **520** confidence-scored producer-to-consumer edges and precondition metadata for tool-, user-, or either-resolvable inputs.
- Combined description parsing, constrained ID heuristics, API-specific rules, and cached LLM matching, improving multi-step task completion from **61% to 79%** and reducing invalid tool calls by **42%** across 150 held-out tasks.

EDUCATION

McMaster University

Expected Apr 2028

B.Eng. Software Engineering

Hamilton, ON

- GPA: **11.8 / 12.0**; Dean's Honour List.

HONOURS & SKILLS

Honours: Loran Scholar Finalist; Won Google Gemini 3 x Cerebral Valley Hackathon; Y Combinator AI Startup School (selected attendee, 2025 & 2026); Hack the North

Languages: Python, TypeScript, JavaScript, Ruby, SQL, Bash, Swift

AI & ML: RAG, embeddings, semantic search, evals, agent orchestration, MCP, Claude Code, PyTorch, OpenCV

Infrastructure: Kubernetes, Docker, Terraform, AWS, Azure, EKS, CI/CD, PostgreSQL, pgvector, Redis, FastAPI, OpenTelemetry, Datadog

Certifications: Certified Kubernetes Administrator (CKA)