Danny Farkouh

dfarkouh@gmail.com linkedin.com/in/dannyfarkouh github.com/dannyfarkouh

Education

McGill University **Expected : December 2027**

B.S. Computer Science: Artificial Intelligence *Montreal, Quebec*

Relevant Coursework

- Data Structures and Algorithms
- Software Design
- Probability
- Operating Systems
- Artificial Intelligence

Experience

Software Developer I Intern **January 2026 – August 2026**

Intact *Montreal, Quebec*

- Built and maintained end-to-end and UI integration test coverage in Cypress across 5 supported carriers, spanning happy paths and edge cases, catching regressions early and reducing manual QA workload by at least 30%.
- Architected a backend API test suite across 4 billing endpoints with reusable auth helpers, enabling direct endpoint validation across all 5 carriers in seconds, eliminating the need to simulate full UI flows per company and reducing per-cycle QA time by 90%.
- Transitioned into full-stack development, shipping production React features and contributing to backend Java code, collaborating cross-functionally with design and backend teams to deliver features to production.

Software Developer Intern **May 2025 – August 2025**

AquaVerti Farms *Montreal, Quebec*

- Designed and deployed scalable AWS infrastructure using Terraform, reducing manual configuration time by 70% and improving deployment consistency through Infrastructure-as-Code.
- Built Python-based AWS Lambda functions to ingest and transform 5,000+ IoT sensor readings daily, enabling reliable analytics and structured storage in Amazon S3.
- Engineered event-driven data pipelines with AWS Lambda and CloudWatch Events, replacing monthly vendor data dumps with automated API integrations and reducing data latency from 30 days to minutes.
- Developed a Python BACnet integration API to collect HVAC and environmental sensor data and stream it into AWS pipelines for centralized processing.

Projects

Ataxx Game-Playing AI Agent | *Python* **December 2025**

- Designed a time-aware alpha–beta minimax agent with iterative deepening, adaptive depth limits, and principal variation (PV) move ordering to maximize search depth under a 2-second constraint.
- Implemented a transposition table (state caching) to reuse board evaluations, reducing redundant computation and improving pruning efficiency.
- Built a phase-aware evaluation and heuristic-driven move ordering system combining material, mobility, stability (corners), and frontier features with dynamically tuned weights.
- Achieved 100% win rate vs. greedy agents and consistent search depth of 3–7 across game phases.

Serverless IoT Data Pipeline | *Terraform, AWS (S3, Lambda, CloudWatch), Python* **July 2025**

- Implemented a serverless ingestion architecture capable of processing 1,000+ JSON uploads per hour, simulating real-world IoT device traffic.
- Built Lambda functions to parse raw sensor payloads and store structured outputs in S3 for downstream analytics.
- Created a cron-based data simulator to stress-test ingestion pipelines and validate system reliability under sustained load.

Certifications

Google Cybersecurity Certificate *(Credential)* **July 2025**

- 160+ hours of hands-on labs covering various basic cybersecurity concepts.

AWS Cloud Quest: Cloud Practitioner *(Credential)* **June 2025**

Skills

Languages: Python, Java, C, JavaScript, TypeScript, Bash, OCaml, SQL, PHP
Developer Tools: Git, AWS (Lambda, S3, IAM, CloudWatch), Terraform, React, Cypress, JUnit, HTML/CSS, Pandas