Oliver Kwun-Morfitt

Toronto, ON | 647-323-8175 | oliverkwunmorfitt@gmail.com | LinkedIn | GitHub | olliekm.com

Education

University of Toronto – St. George Campus **Expected graduation: 2028**
Honours BSc, Computer Science & Statistics, Math (Co-op) *Toronto, ON*
(GPA 3.77) *(Dean's List Scholar)*

Experience

Software Engineer – ML Infrastructure Sep 2025 – Present
University of Toronto Machine Intelligence Student Team *Toronto, ON*

- **Enabled** scalable GPU research workflows by developing **open-source Go CLI** tools that let students submit, queue, monitor, and debug compute jobs on **Tenstorrent** and **AMD** servers.
- **Improved reliability** in multi-user GPU environments by implementing **token-based authentication**, structured logging, and **robust error handling** using Go and Kong-style CLI patterns.

Full-Stack Developer May 2025 – Present
University of Toronto Climbing Club *Toronto, ON*

- **Enhanced maintainability** and user experience by implementing a clean, **component-driven UI** using **Next.js** and **Tailwind**.
- **Improved responsiveness** and layout consistency by building reusable, **mobile-first** navigation and page-structure components.
- **Increased** codebase stability by conducting regular **PR reviews** that standardized styling and enforced component patterns across the app.

Projects

LLM Structured Output Engine | *Python, Pydantic, JSON Schema, OpenAI API, Poetry* Nov 2025

- Built a **provider-agnostic structured-output engine** for reliable **JSON** and **typed responses** from **LLMs**.
- Designed a clean **adapter architecture** and implemented an **OpenAIAdapter** for **multi-provider support**.
- Added Poetry packaging, **tests**, and reproducible environments for a smoother developer and **CI workflow**.

Real-time Ledger API | *Go, Gorilla/Mux, UUID, Docker, REST, PostgreSQL, Git* Nov 2025

- **Ensured** strict **financial correctness** by building a **production-grade double-entry ledger** that enforces per-currency invariants, validates postings, and prevents negative balances.
- **Improved** operational **reliability** by implementing **token authentication**, structured logging, and health probes using **Go**, **Gorilla/Mux**, and **Docker**.
- **Achieved 3.6k req/s** throughput **(p95 = 14ms)** under full **ACID** guarantees by optimizing transaction handling and enforcing strict posting invariants in **PostgreSQL**.

E-commerce REST API | *Go, MySQL, Docker, Redis, Prometheus, Git* Jun 2025 – Jul 2025

- **Increased** system performance from **2.1k to 4.4k** req/s by adding **Redis caching** and building a **concurrent**, connection-reuse–optimized load balancer in Go.
- **Improved** scalability and latency by engineering a modular **REST API** with **JWT** auth, **Dockerized** services, and clean routing.
- **Raised** service availability to **99.6%** by implementing a custom **round-robin load balancer** with health checks, **rate limiting**, and automated failover.

Certifications

Stanford Machine Learning Specialization | *Python, TensorFlow, Numpy, Matplotlib, Scikit.learn* Jul 2024

- Applied core ML concepts including: Decision Trees, Neural Networks, Logistic and Linear Regression, Model Evaluation, and Feature Engineering

Technical Skills

Languages: Python, Go, Java, Typescript, SQL, Javascript, HTML/CSS
Frameworks: React, Node.js, Next.js, gRPC, FastAPI
Developer Tools: AWS (S3, SageMaker), GCP, Docker, PostgreSQL, MySQL, MongoDB, Redis, Kafka, Git, CI/CD
Libraries: Pandas, NumPy, Matplotlib, Poetry, PyTorch, TailwindCSS, pytest, SQLAlchemy, bcrypt