

Ryan Chan

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Education

University of Toronto

May 2027

Bachelor of Applied Science in Computer Engineering, Minor in Artificial Intelligence & Business, Dean's List Scholar

Work Experience

Bloomberg

June 2026 - Aug 2026

Software Engineering Intern, Risk Performance & Platform Front Office Integrations

New York, NY

- Built a context-aware TypeScript/Rapid UI Bloomberg Terminal workflow enabling sell-side trader clients to launch and manage risk reports directly from their active books; shipped from local development through beta to production
- Integrated the workflow with comdb2 services to pull user permissions, enabled risk types, and historical risk reports
- Investigated and resolved client-reported report issues, tracing failures across a distributed systems report orchestration pipeline (Python microservices) using Humio and Splunk logs to identify and ship root-cause fixes
- Partnered directly with Product Managers, sell-side trader clients, and cross-functional teams across time zones to gather requirements and translate workflows into technical specs

Scotiabank Global Capital Markets

May 2025 - Apr 2026

Quantitative Trading Developer Co-op, Electronic Execution & Algorithmic Trading

Toronto, ON

- Embedded in the front office on the trading floor working alongside traders daily, gathering requirements, learning workflows, and translating them into production tools they used and tested directly
- Developed and deployed a real-time trade monitoring and reporting system (Angular, FastAPI, MongoDB) with automated distribution of client-facing research and reports
- Built a production Python pipeline (Pandas, NumPy, scikit-learn) to model intraday time-series data for 6,000+ equities, classifying and clustering based on liquidity buckets, **improving algorithm execution accuracy 8%**
- Built a Java/FIX Protocol handler ingesting **real-time trade data** from exchanges and brokers into internal systems, and SQL pipelines (Oracle, SQL Server) reconciling and computing analytics over millions of trades downstream

Ada

Sep 2024 - Dec 2024

Software Engineering Intern, Growth & Performance

Toronto, ON

- Built a self-serve onboarding flow (React, Redux, MongoDB) that let customers train and deploy their own AI customer-service agents, cutting time-to-first-deployment from **63 days to 7 days**
- Implemented document re-ranking in a RAG pipeline, **improving LLM retrieval precision by 4%**
- Built an internal tool (Python, AWS S3, GitHub Actions) converting 100+ JSON LLM regression tests into version-controlled, human-readable format for faster model evaluation

Tholos

Jun 2023 - Nov 2023

Software Engineering Intern

Toronto, ON

- Built cross-chain ingestion pipelines (Node.js, Web3.js, PostgreSQL, Redis), processing millions of transactions daily
- **Reduced API latency by 72%** through batching, caching, lazy loading and query optimization

Projects

SimplyMail | Electron, TypeScript, SQLite, Next.js

Apr 2025 - Aug 2025

- Architected a local-first desktop email client supporting **20K+ messages** with event-driven IPC architecture
- Implemented Gmail sync using incremental APIs, background workers, and caching for efficient data updates

Ryko | TypeScript, Python, PostgreSQL, AWS, LangChain

Apr 2024 - Aug 2024

- Built a RAG system with dynamic retrieval across vector stores and web data (LangChain, LangGraph)
- Developed a document ingestion pipeline (AWS Lambda, ECR) to process unstructured data into vector embeddings
- Built **40+ REST APIs** and designed PostgreSQL schema from scratch to support scalable retrieval and querying

Technical Skills

Languages: Python, Java, TypeScript, JavaScript, SQL, C++, C

Backend & APIs: REST API design, FastAPI, Node.js, Express, Java, distributed systems, microservices

Data & Infrastructure: PostgreSQL, Oracle, SQL Server, NoSQL, MongoDB, Redis, SQLite, AWS, GCP, Docker

Frontend & AI: React, Angular, Next.js, TailwindCSS, Streamlit, RAG, LangChain, LangGraph, vector stores