Frank Yu

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Education

The University of British Columbia **Vancouver, BC**

B.Sc. – Major Computer Science, Minor Commerce — GPA: 3.95/4.0 *Sep. 2022 – Dec. 2027*

Work Experience

Pason Systems **Calgary, AB**

Software Developer Intern — *Backend & Production Support* *Jan. 2026 - Aug. 2026*

- Enabled secure, scalable access to distributed rig services by engineering a **Python/Falcon** REST backend with JWT authentication, serving **150+ endpoints** in production.
- Cut workstation setup time by **50%** across **300+ Linux machines** by automating deployment and diagnostic scripts.
- Reduced mean incident resolution time by **30%** through optimizing **Splunk** pipelines processing **10K+ events** daily.
- Gave operators visibility into **10K+ sensor channels** and alarms via a **React/Redux** dashboard on **GraphQL** APIs.

Software Developer Intern — *Build Infrastructure* *May. 2025 - Dec. 2025*

- Reduced end-to-end pipeline runtime by **42%** by introducing parallelization, caching, and SQL query tuning.
- Standardized CI/CD policy, licensing, and dependency management across **20+ repositories** by authoring custom **Java Gradle** plugins that automated compliance checks.
- Improved build reliability by migrating **Jenkins** pipelines to **Terraform**-provisioned **AWS EC2 Docker** agents

University of British Columbia **Vancouver, BC**

Teaching Assistant — *CPSC 304: Relational Databases* *Jan. 2025 - Apr. 2025*

- Strengthened database fundamentals for **30+ students** via weekly labs on schema design, SQL tuning, and data modeling.
- Helped **500+ students** ship cloud-ready applications by guiding schema design, query tuning, and API-to-database integration on **MySQL and Oracle**.

Technical Projects

Voice-Activated Navigation App *Jun. 2026 - Aug. 2026*

- Architected a **React** app on a **FastAPI/AWS** backend with **Mapbox** routing, from voice parsing to route rendering.
- Prototyped a camera-based **computer vision** layer for **real-time** road surface and weather classification.

UBC Course and Building Query Engine *Jan. 2024 - May 2024*

- Queried over **60K+ records** by designing a **TypeScript** engine with custom EBNF parsing and multi-key joins.
- Achieved **100% rejection** of malformed and injection-style queries via recursive schema validation and input sanitization.

Additional Experience

UBC Motion **Vancouver, BC**

Software Developer and Treasurer — *United We Can* *Sept. 2024 - Sept. 2025*

- Supported **500+** monthly bottle-depot pickups for a non-profit by co-founding the club and building a cross-platform mobile app with **Azure AD** authentication and data models optimized for low-latency interactions.

UBC Game Dev **Vancouver, BC**

Software Developer — *Developer Team* *Sept. 2024 - May. 2025*

- Reduced CPU spikes by **40%** and stabilized frame rates via object pooling, async scene loading, and collision detection.

Technical Skills

Languages: Java, Groovy, Python, Go, TypeScript, JavaScript, Ruby, SQL, C, C++, C#, Kotlin

Frameworks and Libraries: React, Redux, Ruby on Rails, Spring Boot, FastAPI, Falcon, Express.js, PyTorch, Scikit-learn

Developer Tools: AWS (EC2, S3, RDS), Docker, Kubernetes, Terraform, Jenkins, Kafka, PostgreSQL, GraphQL, Splunk

AI Tooling: Claude Code, Cursor, GitHub Copilot, v0, MCP servers, Anthropic, OpenAI APIs