

TOBY LAU

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EDUCATION

University of British Columbia

B.Sc. Computer Science (3.95/4.00) – Dean's Honours List

May 2028 (Expected)

Vancouver, BC

TECHNICAL SKILLS

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

Frameworks: React, Spring (Boot), Next.js, Express, Flask, FastAPI, JUnit, Jest

Technologies: AWS, GCP, PostgreSQL, Docker, Kubernetes, ArgoCD, Liquibase/Alembic, GraphQL, gRPC

Tools: Git, Postman, Datadog, Jupyter, DBeaver, Vim, Figma, Jira, IntelliJ, Claude Code

EXPERIENCE

Squarepoint Capital

Software Engineer Intern – Data Services

May 2026 – Aug 2026

Montreal, QC

- **Alpha Monitor:** Building a dashboard over a write-heavy time-series database for ~ **50** desks to schedule custom health or performance queries against **1100+** production alphas providing granular strategy-level attribution for **\$XXm+** total PnL.
- **Research Compliance:** Improved firm-wide research quality by batch-processing staleness flags on **47k+** reports, updated daily via cron jobs. Automated stale report tracking via multi-level management escalations and alerts for **150+** managers.
- **Monorepo Transition:** Migrated Intraday HFT dashboard backend (Python packages + GraphQL/gRPC microservices) into a monorepo, overhauled CI scripts and unified individual Helm charts into an Umbrella deployment to Kubernetes via ArgoCD.

Planview

Software Engineer Intern – Planview Copilot (AI Products)

Jan 2025 – Aug 2025

Vancouver, BC

- **Performance:** Reduced chat response latency by **50%+** by implementing concurrent data retrieval tool calls to AWS Lambdas in Java-based chat service; reduced CI/CD times by **40%+** by optimizing testcontainers caching strategies and EC2 configs.
- **IdP Migration:** Migrated **2,000+** users across **3+** products by deploying Liquibase changesets for PostgreSQL and refactoring Hibernate-based data models/queries to reconcile tenant/user IDs, unblocking a feature release for Planview Connect 2025.
- **Data Governance:** Implemented a data obfuscation and logging pipeline for **21k+** daily logs to route sanitized logs to Datadog, meeting internal retention policies, while using FluentBit log tailing to preserve raw logs in AWS CloudWatch.
- **Data Compliance:** Streamlined SOC2 compliance by developing a Python microservice using EventBridge and Slack + Jira APIs that listens to upstream IAM service events, notifies a Slack channel and creates customer deletion tickets in Jira.
- **AI Features:** Delivered a self-service RAG platform for **100+** tenants with S3 and Bedrock, enabling document analysis/Q&A. Built a hybrid tool-calling/MCP chat service and registry to support legacy tools while integrating newer MCP servers.

UBC Department of Computer Science

Undergraduate Teaching Assistant – CPSC 210 (Introduction to Object Oriented Programming)

Sep 2024 – Dec 2024

Vancouver, BC

- Taught OOP/OOD, design patterns, and TDD with JUnit to **300+** students; mentored **25+** students in weekly labs/office hours.

PROJECTS

Membership Portal | React, TypeScript, PostgreSQL, Supabase, Google Cloud Platform

- Gained **250+ MAU** and **\$5000+** by building payments infrastructure using Stripe, and webhooks to handle payment lifecycle.
- Reduced admin workloads by ~**50%** by building Supabase RPCs and Apps Script add-ons to sync data with Google Sheets.
- Implemented GitHub Actions CI/CD for Google Cloud Run with staged deployments, secrets management, and unit testing.

Extreme Vocals Classifier | Python, PyTorch, Numpy, Scipy, Librosa, Google Colab

- Synthesized a **500+** extreme vocal sample dataset by isolating vocals with Demucs, extracting and processing relevant vocal regions with Numpy/Scipy (RMS normalization, high-pass filter), and augmenting vocals with librosa from **57+** songs.
- Built a clustering pipeline to group vocal samples using spectral and temporal features to identify various vocal techniques.

EXTRACURRICULARS

Databricks

Student Fellow

June 2026 – Present

Remote

- 1 of 13 students worldwide invited into the inaugural Databricks student fellows program.