Eric Seppanen

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Education

Simon Fraser University **May 2027 (Expected)**
Bachelor of Science in Computer Science *Burnaby, BC*

- **GPA:** 3.72/4.33 — President's & Dean's Honour Roll
- **Relevant Coursework:** Data Structures, Algorithms, Systems Programming, Database Systems

Experience

Amazon **May 2026 – August 2026**
Software Development Engineer Intern *Vancouver, BC*

- Designed and deployed a production **TypeScript/CDK** pipeline processing **10k+ events/day** from **3 cross-account Kinesis streams** through **Lambda** and **Firehose** into partitioned **S3/Iceberg** tables.
- Built a parameterized **Athena** analytics API for **500+ workflows**, exposing **5 lifecycle metrics** with configurable time granularity and a one-hour cache to identify duration trends and stage bottlenecks.
- Shipped a **DynamoDB**-backed audit API for **500+ workflows**, reconstructing revisions, actors, and stage transitions and returning per-update **JSON diffs** in **under 1 second** for incident triage and user visibility.
- Built a comprehensive **integration test suite** covering APIs and **end-to-end event processing**; configured production alarms for stream iterator age, malformed records, and Firehose failures.
- Handled oversized event payloads by offloading data to **S3** and embedding recovery metadata in truncated **Firehose** records, preserving events and downstream analytics compatibility.

Seaspan ULC **May 2025 – December 2025**
Software Engineer Intern *North Vancouver, BC*

- Built and deployed a Dockerized lineage & metadata explorer (**FastAPI** + **React/Vite**) on **Azure Container Apps**, indexing **26k+ tables**, **6k+ views**, and **1.3M+ columns**.
- Developed a **Databricks ETL pipeline** across multiple **SQL Server** sources to audit legacy project numbers for an **Oracle ERP** migration, flagging **50k+** problematic records for remediation.
- Built a **Python** toolkit over the **ARIS REST API** to automate object moves, renaming, and standards enforcement, saving **10+ hrs/month** of manual governance work.

RWA Group Architecture **January 2025 – April 2025**
Data Engineering Intern *Vancouver, BC*

- Automated timecard reconciliation reports with scheduled **Azure Functions**, saving **30+ hrs/month**.
- Built **Python** ETL to normalize IDs and dates, deduplicate records, and flag anomalies across **300,000+** timecard rows, producing consistent tables for downstream BI.
- Orchestrated **Azure Data Factory** jobs to train and score a **scikit-learn Random Forest** for project-billing forecasts.
- Consolidated reporting into **Azure SQL** with versioned tables and views, retiring **35+** spreadsheet trackers.

Projects

Spot | *Rust, Tokio, Ratatui, Spotify Web API/SDK*

- Built a standalone playback engine using **Rust/Tokio**, reducing memory usage by **38%** compared with Spotify's Electron desktop client.
- Implemented **Spotify Connect** playback in the terminal, streaming and decrypting live audio without the official app.
- Developed an **async Rust** client with CLI and TUI interfaces, **20+ commands**, and **OAuth PKCE** authentication.

PlanSFU | *React, Ruby on Rails, SQLite*

- Built a data ingestion layer for **3,000+** SFU course instances from the **SFU REST API**, enabling course search.
- Implemented Rails controllers, services, and session authentication for private, per-user degree plans.
- Developed a Ruby parser to convert prerequisite text into **Boolean expression trees** representing course eligibility rules.

Skills

Programming Languages: Python, Java, C++, TypeScript, SQL, Rust, C, Ruby, JavaScript, x86-64 Assembly
Frameworks/Libraries: FastAPI, React, Ruby on Rails, Tokio, Node.js, Stencil, Django, Scikit-learn, PySpark
AWS: CDK, Kinesis, Lambda, Firehose, S3, DynamoDB, Athena, Glue, IAM
Azure: Databricks, Data Factory, Functions, Container Apps, Blob Storage, Azure SQL
Data: Apache Spark (PySpark), Apache Iceberg, SQL Server, PostgreSQL, SQLite
Tools: Git, Docker, Linux, Bash, GitHub Actions, Tableau, Power BI, Streamlit