

Tanson Lee

Personal Website: <https://tansonlee.me>
GitHub: <https://github.com/tansonlee>
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Education

University of Waterloo, Bachelor of Computer Science

2025

- **Courses:** Real-time Programming, OS, Networking, Distributed Systems, Data Structures, Algorithms, AI
- **Faculty GPA:** 3.98 / 4.0

Skills

- **Languages:** C++, C, Python, Java, Typescript, JavaScript, Bash, GLSL, SQL
- **Technologies:** Kubernetes, Docker, gRPC, Snowflake, Redis, Cassandra, PostgreSQL, Hadoop MapReduce, Apache Spark, OpenGL, GraphQL, NumPy, Node.js, React

Experience

Snowflake

Apr – Aug 2024

Software Engineer

San Mateo, California

- Current software engineer on the Database Workload Optimization team working on data clustering

Bloomberg

Sept – Dec 2023

Software Engineer

New York, New York

- Built a **high-performance distributed caching microservice** supporting 30,000+ writes per second enhancing fault tolerance for asset pricing leading to a **95%** reduction in pricing errors
- Developed a **distributed data-sharing system** with gRPC which allows for parallel execution of pricing calculations across servers leading to a **300%** improvement in speed

Global Illumination (acquired by OpenAI)

Jan – Apr 2023

Software Engineer

New York, New York

- Extended the **in-house physics engine** to support swimming, climbing, ladders, and ice
- Created realistic water reflections by developing **high-performance OpenGL shaders**
- Redesigned the **NPC AI microservice** to support Newtonian physics and 3-dimensional NPC movement
- Implemented fish and bird NPCs with realistic **flocking algorithms**, improving the visual appeal of the world

Paper

May – Aug 2022

Software Engineer

San Francisco, California

- Overhauled the auth system to support **role-based access control**, improving teamwork for over 85% of clients
- Built **localization infrastructure** and added French support, expanding reach to European customers
- Redesigned the **onboarding flow** to check liveness, documents, and risk indicators for legal compliance

Dreamschools

Sept – Dec 2021

Software Developer

Toronto, Ontario

- Built infrastructure for coupons, gift cards, refunds, and taxes in the payment system processing \$25,000/month
- Reduced tech debt in the checkout and financial reports, improving scalability and shrinking modules by 45%

Projects

Echo Cache

<https://github.com/tansonlee/echo-cache>

- Created a high-performance distributed in-memory cache with scalability, fault tolerance, and a custom protocol

PyScript

<https://github.com/tansonlee/PyScript>

- Developed a turing-complete language with features including variables, functions, loops, conditionals, and I/O

Ray Tracer

<https://github.com/tansonlee/ray-tracer>

- Built a multi-threaded ray tracing engine in C++ with support for materials such as metal, plastic, and glass

Notifyr

<https://notifyr.vercel.app/>

- Created an SDK, API, dashboard, and documentation developer suite to simplify notification delivery