Tanson Lee

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Education

University of Waterloo, Bachelor of Computer Science — April 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, SQL
- **Technologies:** Kubernetes, Docker, gRPC, Snowflake, Redis, Cassandra, PostgreSQL, Hadoop MapReduce, Apache Spark, OpenGL, GraphQL, NumPy, Node.js, React

Experience

Meta — Sept – Dec 2024
Software Engineer Intern — Menlo Park, California

- Incoming Software Engineer Intern on the Ranking Infrastructure team

Snowflake — Apr – Aug 2024
Software Engineer Intern — San Mateo, California

- Optimized performance of database clustering for **6.84%** of tables by generating and **executing a parallelized query plan**, resulting in a performance improvement of **35%** for clustering and **25%** for table scan queries
- Enhanced the generation-based clustering **file selection algorithm**, improving generation consolidation and reducing table scan costs by **70%** for tables with high insertion workloads

Bloomberg — Sept – Dec 2023
Software Engineer Intern — 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 Intern — 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 3D Newtonian physics and added fish & birds to the world

Paper — May – Aug 2022
Software Engineer Intern — San Francisco, California

- Re-architected the auth system to support **role-based access control**, used by for over 85% of customers
- Built **localization infrastructure** and added French support, expanding reach to European customers

Dreamschools — Sept – Dec 2021
Software Developer Intern — 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:** A high-performance distributed in-memory cache with scalability and fault tolerance
- **PyScript:** A turing-complete language with variables, functions, loops, conditionals, and I/O
- **Ray Tracer:** A multi-threaded ray tracing engine in C++ with support for metals, plastics, and glass
- **Notifyr:** A developer suite for notification delivery including an SDK, API, dashboard, and documentation