

Takatoshi Lee

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EDUCATION

University of Toronto

Honours Bachelor of Science in Computer Science (CO-OP)

Toronto, Ontario

Expected Dec. 2028

- GPA: 3.93/4.0 | Dean's List Scholar | University of Toronto Entrance Award of Distinction
- Relevant Coursework: Data Structures & Algorithms, Software Design, Systems Programming, OOP, Databases

EXPERIENCE

Software Developer Intern

Amicare

Sept. 2025 – Dec. 2025

Toronto, ON

- Shipped a React Native marketplace matching families to home-care workers, with payments and real-time sync.
- Added live care tracking via Socket.IO, giving families visibility into checklists and comments as they update.
- Integrated Stripe Connect end-to-end via REST API: onboarding, webhooks, and automated payouts.
- Migrated codebase to strict TypeScript and Node.js 20; resolved **200+** type errors to unblock CI/CD.

Machine Learning Research Assistant

University of Toronto, Prof. M. Chechik's Lab

May 2026 – Present

Toronto, ON

- Built and deployed a full-stack platform (Next.js 16, React 19, TypeScript, Supabase/PostgreSQL, AWS Bedrock) where domain experts verify LLM-extracted rules into labeled ground-truth for a trustworthy-AI study.
- Designed a 10-table PostgreSQL schema with row-level security, soft deletes, and whitelist auth; built admin tooling and interaction-event logging for verification-behavior analysis.
- Engineered the extraction pipeline on AWS Bedrock (Claude): a unified extraction call plus a deterministic aligner that snaps each field to its exact source-PDF span, scored by inter-annotator agreement (Cohen's κ).

Data Analyst Intern

Alcon (Fortune 500)

May 2025 – Aug. 2025

Toronto, ON

- Eliminated **4+ hours/week** of manual reconciliation by building a Python tool to auto-ingest SAP data.
- Cut analysis lookup time **60%** with a PCA-based customer-similarity view surfacing comparable accounts.
- Modeled rebate impact via interrupted time-series regression; surfaced **\$50K+** in potential missed rebates.
- Sped up data reloads **10x** via pickle state caching; added one-click Excel report export.

PROJECTS

html.ai (UofTHacks) | Python, FastAPI, MongoDB, Docker, JavaScript 🔗

- Created **2** demo storefronts and a dashboard for an engine that adapts site layout and content per visitor.
- Embedded the JS SDK (`<ai-optimize>`) into both demos; built a debug panel of per-visitor variant changes.

EduGauge (Finalist, NTU Singapore Hackathon) | Python, TensorFlow, Flutter, Firebase, OpenCV 🔗

- Prototyped a tool flagging confused students via Haar-cascade detection and a TensorFlow CNN on webcam frames.
- Streamed per-student state to Firestore on each change, driving a live Flutter dashboard of class engagement.

Clustering with MSTs: How Do They Compare? (Technical Report) | C++, Python, NumPy, scikit-learn 🌐

- Implemented Kruskal's and Prim's in C++ with union-find; Kruskal ran **117%** faster on sparse graphs.
- Benchmarked MST clustering vs K-Means on **200+** datasets: MST won on non-convex shapes.

TECHNICAL SKILLS

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

Technologies: React, React Native, Next.js, Node.js, FastAPI, Flutter, Supabase, PostgreSQL, MongoDB

Tools: Git, Docker, CI/CD, Linux, Amazon Web Services (AWS), Firebase, GitHub Actions, JUnit, Pytest, Jira