Tony Li

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EDUCATION

University of Waterloo – Bachelors in Computer Science, Co-op	Sep 2019 – Present
Graduating May 2025. Seeking 2025 New Grad Opportunities	GPA: 3.9
Kyoto University (Exchange Program)	Oct 2023 – Aug 2024

WORK EXPERIENCE

Federato | Software Engineer Intern — Sep 2024 – Dec 2024
- Developed insurance policy lifecycle management processes handling policy creation, endorsement, renewal, and cancellation, along with billing and payment calculations.
- Created data integration pipelines using BigQuery, processing over 2,000 columns of insurance data daily and producing optimized tables and views for frontend consumption.
- Automated generation of dynamically rendered documents, emails to customers, and daily reports.

Faire | Backend Software Engineer Intern — May 2023 – Aug 2023
- Led the scoping, design, as well as implementation of a new search suggestions spellcheck system working alongside data science, frontend, and mobile teams.
- Parallelized search suggestions flow by making use of Kotlin executors querying Apache Lucene through Elasticsearch to reduce user side latency by up to 80%.
- Resolved over 300,000 missed search suggestions by fixing encoding issues in AWS DynamoDB.
- Conducted A/B testing, performed regular production deployments, and created Datadog monitors.

Mercari | Backend Software Engineer Intern — Jan 2023 – Apr 2023
- Built Github Actions CI/CD pipelines for automated building and deployment of notification templates on a Google Cloud Spanner database in under 10 minutes, eliminating need for manual work.
- Set up Kubernetes cron pods for scheduled notification management tasks, processing over 8 million notifications per day and automatically scaling horizontally through Datadog metrics.

Ford (Previously Autonomic) | Backend Software Engineer Intern — Sep 2022 – Dec 2022
- Built command processing microservices in Java Spring handling over 1,500 Kafka records per second.
- Improved command state consistency logic across multiple Kafka streams applications and PostgreSQL databases, eliminating over 48,000 commands stuck in non-terminal states.
- Engineered features and endpoints for the launch of a new custom command initiative to reduce developer time by allowing customers to independently bootstrap new command definitions.

University of Waterloo | Undergraduate Research Assistant — May 2022 – Aug 2022
- Developed a fluid simulation system in C++ implementing the incompressible Navier-Stokes equations on a 2-D marker-and-cell grid as part of the Computational Motion Group.

Infor | Backend Software Engineer Intern — Jan 2022 – Apr 2022
- Conducted an overhaul of the Workforce Management Spring application's logging framework from Log4j to Logback to address security concerns and decouple configuration from code.
- Revised database access logic to improve Flyway database migration speeds by up to 40%.

Leapcure (Previously Honeybee Trials) | Software Engineer Intern — May 2021 – Aug 2021
- Implemented a subscription-based pricing model and a user prescreening survey system across a Node.js, Express, React, Next.js and MongoDB application, improving customer onboarding efficiency.

PROJECTS

FlowerID | Mobile app that identifies flowers species — tonylizj.com/flower
- Made with React Native and TensorFlow.js, uses a CNN to identify flowers with over 80% accuracy.

highlighter | Better code syntax highlighting in Discord — tonylizj.com/hl
- REST API that syntax highlights code and a chat bot that highlights code in chat within seconds.

SKILLS

Languages:	C++, Java, Kotlin, TypeScript/JavaScript, Python, C, SQL, R, HTML/CSS
Technologies:	AWS, Google Cloud, Spring, Node.js, PostgreSQL, Kubernetes, Docker, Datadog, Git