

# Brandon Liang

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## SKILLS

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**Languages:** Python, TypeScript, JavaScript, SQL, HTML/CSS

**Frameworks & Libraries:** React, Next.js, Node.js, FastAPI, Express.js, Jest, Pytest

**Databases:** PostgreSQL, MongoDB

**Cloud & DevOps:** AWS (ECS, RDS, ElastiCache, ALB), Terraform, CI/CD, GCP, Azure, Docker, Git

**Tools & Methodologies:** Jira, Agile/Scrum

## EXPERIENCE

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### Software Developer

Optimize Everything | Vancouver, BC | Mar 2025 - Current

- Built rideshare platform MVP from concept to production launch, delivering complete booking workflow, user authentication system, and payment integration in 8-month timeline as founding engineer
- Built RESTful API backend with FastAPI implementing OData query standards, JWT-based authentication with refresh token rotation, role-based access control, and 20+ endpoints supporting trip management, user profiles, contracts, and reviews
- Designed PostgreSQL database schema for multi-tenant architecture with 30+ normalized tables supporting complex relationships between users, trips, contracts, payments, and locations with optimized indexing
- Established comprehensive test infrastructure with Pytest achieving 78% code coverage including 100% coverage on all database models, 85-99% on critical authentication and booking flows, and automated testing in CI/CD pipeline

### Web Developer

Z-Motors Group | Vancouver, BC | Oct 2024 - Feb 2025 | Contract

- Launched a marketing website with Next.js and Decap CMS that reduced annual website maintenance costs by 85%
- Reduced page load times to under 2 seconds by utilizing Next Image optimization strategies and caching
- Implemented client-side search functionality with debounced inputs and filtered results, reducing API calls and improving user interaction speed by 40%

### Software Developer

Ontario Health | Toronto, ON | Sep 2021 - Sep 2022

- Developed and tested a hospital budget reporting tool to track and analyze departmental spending, serving 200+ facilities, using React (TypeScript) for the frontend and Node.js/Express.js APIs with MongoDB on Azure
- Built a dynamic reporting dashboard frontend with interactive visualizations, enabling real-time budget insights and reducing the time spent on manual data analysis by 40%
- Optimized database queries and implemented efficient archiving that reduced page load times from 8s to 2s
- Designed an in-browser Excel spreadsheet component using React and custom hooks that streamlined data entry workflows

## PROJECTS

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### Machi Quest

<https://machi.quest> | FastAPI, Next.js, PostgreSQL, Redis, AWS (ECS, RDS, ElastiCache), Terraform

- Built a full-stack gamified productivity platform with Next.js, FastAPI, PostgreSQL, and event-driven workers using Redis Streams to ingest real-time data from webhook integrations like GitHub and Strava
- Deployed production infrastructure to AWS ECS Fargate, RDS Multi-AZ, ElastiCache, and ALB, fully provisioned via Terraform and delivered using GitHub Actions CI/CD
- Implemented scalable, fault-tolerant architecture while reducing infrastructure spend by 30% through optimization and resource tuning

### Selah Library

<https://www.selah-library.app> | Express.js, Next.js, PostgreSQL

- Developed and deployed production-ready full-stack application with Next.js/Express.js architecture and Google Drive API integration, actively serving 20+ users with 99.9% uptime
- Built automated metadata extraction pipeline processing 300+ song files, standardizing tags and enabling fuzzy search across artist, title, and album fields

## EDUCATION

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### University of Toronto

Bachelor of Science (B.Sc.) in Mathematics and Minor in Computer Science | Toronto, ON | May 2023