LIAM HUYNH

Software Engineer

✉ liam.huynh@mail.utoronto.ca | ☎ 647-771-4869 | 🔗 linkedin.com/in/liamhuynh | ⌂ github.com/huynhli | ⌂ liamhuynh.pages.dev

EDUCATION

University of Toronto *Expected graduation: April 2027*
Bachelor of Computer Science and Mathematics *Toronto, ON*

EXPERIENCE

Full-stack Developer | *TypeScript, React, PostgreSQL, Go, Redux, Jest, Tanstack Query, Docker, C#* Jul. 2025 – Aug. 2025
TBSP Games *Toronto, ON*

- Built 3+ scalable web apps using **React/TypeScript** (frontend) and **Go/Fiber** (backend), **growing the customer base 3x**
- Enhanced development workflow by migrating 20+ tests from **Jest** to Vitest, improving unit and integration **test runtime by 5x**
- Developed a centralized **PostgreSQL database** to integrate application-wide state management and fetch data using **Redux and Tanstack Query**, reducing average query response time by **50%**
- Led collaboration between 3 internal teams using **Jira**, translating project requirements into technical specifications and delivering features **2 weeks ahead** of schedule
- Streamlined CI/CD pipeline by implementing **Docker containerization** and **Bash** scripts for 3 project environments, decreasing setup time across development, staging, and production by **75%** for new employees and interns

Firmware Specialist | *C++, Zephyr, CMake, DeviceTree* May 2025 – Jun. 2025
University of Toronto Aerospace Team *Toronto, ON*

- Developed SPI flash communication in **C++** with DeviceTree on **Zephyr RTOS** to deliver crop field imaging data for a university satellite launching in 2030

PROJECTS

Auralis - ML Music Generation ↗ | *Java, Spring Boot, JUnit, PostgreSQL, Python, TensorFlow, Keras, Next.js, React*

- Led collaborative development in an **Agile/Scrum** environment, conducting **5+** peer code reviews using multiple feature-branch **Git** and **Github** workflows while maintaining a 95% merge success rate and 75% code coverage
- Implemented **JUnit** testing with **95% code coverage**, integrating automated **CI/CD pipelines** to ensure code quality and reduce deployment errors by **50%** across Java Spring Boot services
- Optimized **PostgreSQL** database queries through input sanitization and **OAuth 2.0** with JWT caching, reducing average **HTTP** response times by **50%** for complex searches
- Developed a **sequence-based LSTM model** using TensorFlow/Keras to generate original musical melodies, training on MIDI files and producing 30-second compositions with **85%** pattern coherence, enabling automated music creation for web users

Game Design Blog ↗ | *MongoDB, OAuth 2.0, React Context API, React, Typescript, Go, Tanstack Query, Cloudinary*

- Designed a scalable **RESTful API** following **SOLID** and object-oriented principles, implementing efficient data fetching with **Tanstack Query** and **Axios** to reduce API response times from 800 ms to **<200 ms**
- Introduced user authentication with **OAuth 2.0** and **JWT** refresh, improving successful response rate to 95% and page load by **500ms**
- Implemented **cloud-based media pipeline** using Cloudinary and **MongoDB**, enabling automatic image optimization and CDN delivery that reduced average load time by **1000 ms** across **20+** articles
- Optimized application architecture using **React Context API** for global state management, eliminating **30%** of prop drilling across **10+** components and reducing re-renders by **50%**, resulting in smoother UI interactions

similarSongs ↗ | *React, Typescript, Go, RESTful APIs, Spotify Web API, Git, GitHub*

- Built 12 **RESTful API** endpoints in **Go** integrating **Spotify Web API**, achieving **99% uptime** with concurrent users and ensuring seamless client-server communication
- Developed a responsive mobile-first **React** application with **TypeScript** and reusable components, removing 30% redundant code and improving page load times from **3s to 1.5s**

TECHNICAL SKILLS

Programming & Scripting Languages: JavaScript, TypeScript, Python, Go, Bash, SQL, R, Java, C#, HTML5, CSS3
Frontend & Backend Development: React, Redux, React Context API, Tanstack Query, Axios, Fetch API, JUnit, Jest, Vitest, ESLint, Shadcn, Motion, Tailwind CSS, React Router, Next.js, Node.js, Spring Boot, Express.js, FastAPI, Flask, Fiber (Go), RESTful APIs, JWT authentication, OAuth 2.0
Databases, Tools & DevOps: PostgreSQL, MongoDB, Supabase, Git, Github, CI/CD, Docker, Cloudinary, Jira, Agile
Machine Learning, Data & Languages: Tensorflow, pandas, Matplotlib, NumPy, English (Native), French (B2)