

# CHI MING LAI

☎ 647-684-1666   ✉ alexlai7777@gmail.com   in alexLinkedin   🌐 alexLaiiii   📁 portfolio

## Summary

---

- Bachelor of Computing candidate, Queen's University.
- Web development expertise – Built and deployed web applications using Vercel and Heroku, with hands-on experience in both frontend and backend development.
- Proficient in backend Backend and middleware development – Created and integrated APIs and middleware for personal projects, enhancing web functionality and ensuring seamless data flow between services.
- Skilled in Frontend development – Developed responsive websites and managed content using Wix and GitHub, demonstrating proficiency in design and content management.
- SQL/PLSQL proficiency – Designed and implemented enterprise-level database procedures, contributing to scalable and efficient data solutions.
- Data-driven thinker – Automated data workflows and structured SQL/PLSQL procedures, optimizing system performance and reducing manual tasks.
- Quality assurance experience – Designed and implemented QA testing for web applications to ensure functionality, performance, and user experience.
- Algorithmic problem solver – Applied sorting logic and procedural updates in database management to mirror efficient algorithm design patterns.
- Version control expertise – Managed SQL/PLSQL projects on GitHub, demonstrating collaborative development and organized code management.
- UML diagramming – Created UML class and sequence diagrams as part of software design coursework.
- Advanced Microsoft Office skills – Proficient in Word, Outlook, Excel, and PowerPoint, with experience presenting complex projects.
- Effective communicator – Developed strong communication skills through collaborative projects and presentations.

## Education

---

### Queen's University

*Bachelor of Computing (Honors)*

September 2024 – Present

*Kingston, Canada*

- Computer Science program has developed my analytical ability to problem solve, differentiate, critically think, and create code.
- Relevant Course: CISC121 Introduced to the software development lifecycle, including Agile methodologies like Scrum, with hands-on experience through labs and small projects..
- Languages: JavaScript(React), HTML/CSS, Python, C/C++, SQL/NoSQL (Oracle,Postgres,MongoDB).

### Seneca College

*Diploma in Computer Programming*

2021 – 2023

*Toronto, Canada*

- Relevant Courses: Web422, Developed full-stack web applications using React, showcasing proficiency in modern web development practices..
- Gained experience in data structures and algorithms through coursework, demonstrating proficiency in key data structures such as AVL trees and hash tables, implemented using python.
- Completed courses in Software Analysis and Design, with a focus on creating UML class and sequence diagrams through case studies, simulating the development process in a business environment, Tool used: visual paradigm.
- Applications: Microsoft Office, Canva, Wix, WordPress, Github, Adobe Creative Suite.

## Technical Experience

---

### Qweb web developer

2025

- Responsible for developing and implementing new features across both the front-end and back-end for the Qweb website.

### Portfolio Website

2023

- \* Developed and deployed a responsive portfolio site using React and Next.js for both frontend and backend development.
- \* Designed and implemented a visually appealing user interface using Bootstrap and custom CSS.
- \* Integrated Formspree to implement a fully functional contact form that sends inquiries directly to email, enhancing user engagement and accessibility.
- \* Collaborated with peers to test and debug code, ensuring high quality, functionality, and effectiveness across all components.

### Museum Treasure Hunt WebApp development

2023

- \* Developed a museum artifact browsing web app using Next.js and React, deployed on Vercel.
- \* Created custom middleware to handle authentication, validate API requests, and manage role-based access control, ensuring secure and efficient data flow between frontend and backend.
- \* Built secure user authentication and authorization by integrating MongoDB for user data storage (e.g., usernames and hashed passwords) and JWT (JSON Web Token) for session management and access control.
- \* Applied cybersecurity best practices by implementing encrypted password storage, HTTPS, and token expiration policies to protect user credentials and sensitive data.
- \* Designed an advanced search system that enables filtering by title, geographic location, medium, highlighted status, and current availability of artifacts.
- \* Enforced data encryption and secure storage practices to safeguard user credentials and sensitive information.
- \* Optimized web application performance by rewriting search and filtering algorithms, improving efficiency and reducing response times.

### SQL/PLSQL Development Project

2023

- \* Developed PL/SQL procedures to automate student grading and employee bonus calculations.
- \* Implemented procedural logic to process and update data dynamically using cursors and conditional loops.
- \* Designed and manipulated relational tables, demonstrating strong DDL/DML skills.
- \* Utilized GitHub for version control, tracking procedural scripts and table modifications.

### Online Store Database Management System

2023

- \* Developed a C++ console-based DBMS application using Oracle OCCI to manage online store operations.
- \* Designed and implemented CRUD operations for user accounts, products, and purchases through SQL queries and procedural programming.
- \* Collaborated in a team to integrate product, account, and purchase management features into a cohesive database application.
- \* Utilized error handling and database connectivity to ensure seamless interaction with Oracle DB servers.

### Assembly Line Management System

2023

- \* Developed a C++ program to simulate an assembly line system that processes customer orders through multiple workstations.
- \* Utilized object-oriented programming (OOP) principles, designing classes like Station, Workstation, and CustomerOrder to model real-world manufacturing workflows.
- \* Automated the flow of orders through the assembly line using the LineManager class, processing and categorizing orders as completed or incomplete.
- \* Implemented templated functions to dynamically load stations and orders from files, demonstrating proficiency in file I/O, templates, and exception handling.
- \* Ensured memory efficiency by dynamically allocating and deallocating objects, preventing memory leaks.

## Languages

---

Fluent in English

Native proficiency in Mandarin and Cantonese(Chinese)