

Jacob (Shuwei) Zhou

Toronto, ON | jacob.zhou@mail.utoronto.ca | +1 (289)-937-0341 | [Linkedin - Jacob](#) | [Github - Jacob](#)

PROFESSIONAL EXPERIENCE

Web Service Internship | High-Concurrency Flash Sale System - React + SpringBoot

May 2025 – July 2025

- **High-Concurrency Architecture:** Developed a burst-traffic web service, improving response time by ~40% under peak load through Redis caching and asynchronous processing pipelines
- **Authentication & Security:** Implemented JWT-based authentication, reducing unauthorized access incidents and enabling scalable session management for 10K+ users
- **Inventory Consistency:** Eliminated overselling in flash-sale scenarios using optimistic locking and inventory pre-deduction, maintaining 99.9% transaction accuracy.
- **Tech Stack:** React, Spring Boot, Redis, MyBatis, JWT, async processing, distributed locking.

Competitive Programming Contestant | Meta Hacker Cup & Canadian Computing Competition (CCC)

Jan 2023 – Oct 2024

- Advanced to Round 2 of the 2024 Meta Hacker Cup, ranking in the top approximately 5–10% among 20,000+ global contestants.
- Earned CCC Senior Honour Roll recognition, placing in the top 4% in 2023 and top 2% in 2024.
- Applied dynamic programming, graph algorithms, greedy strategies, and advanced data structures to solve complex problems under strict time and memory constraints.
- Designed optimized solutions with efficient time and space complexity for large hidden test cases.

Software Development Intern | Xi'an Webber Software Co., Ltd.

May 2026 – Aug 2026

- Developed and maintained a full-stack new media account management platform supporting Bilibili, Douyin, Weibo, and Kuaishou.
- Built FastAPI and SQLite backend features including account scheduling, health monitoring, platform request signing, JWT authentication, and automated alerts.
- Developed React and TypeScript interfaces for account management, login, cookie importing, QR-code setup, and cross-platform content collection.

PROJECT EXPERIENCE

Torio / PlaceFinder (Smart Itinerary Planning Web Application)

2026

- **Backend Integration System:** Developed a travel planning platform integrating Geoapify Places API, Open-Meteo API, OpenCage Geocoding, and Google Maps Routes API for dynamic itinerary generation
- **Full-Stack Feature Development:** Implemented user authentication, email verification, itinerary storage, and personalized route optimization with team-based module ownership
- **Tech Stack:** React, Node.js, RESTful APIs, Geoapify API, Open-Meteo API, OpenCage API, Google Maps Routes API, SQL/NoSQL

Distributed Job Queue (TCP-Based Distributed Systems Project)

2025

- **Distributed System Architecture:** Designed a 3-component system (Server, Producer, Worker) using TCP-based communication and centralized queue management
- **Concurrent I/O Engineering:** Implemented single-process non-blocking I/O using select() to handle multiple clients without multithreading or multiprocessing
- **Fault-Tolerant Task Processing:** Supported task cancellation, worker disconnection recovery, automatic re-queuing, and reliable message delivery using structured C protocol design
- **Tech Stack:** C/C++, TCP Socket Programming, POSIX select() I/O multiplexing, Linux environment

EDUCATION

Bachelor of Science, Computer Science | University of Toronto

2024 - 2029

SKILLS

- **Programming Languages:** Java, Python, C++, C, Assembly (MARS)
- **Web & Backend Development:** React, Spring Boot, MyBatis, RESTful APIs, JWT authentication
- **Data & Analytics Tools:** SQL optimization, R data analysis, Power BI, Tableau, mathematical modeling
- **Software & Tools:** Visual Studio Code, IntelliJ IDEA, Eclipse, Git, GitHub, Microsoft Office Suite
- **Professional & Language Skills:** Problem-solving, collaborative development, English (proficient), Mandarin (native)