

# Xiaoyang (Jason) Xie

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## EDUCATION

### University of Toronto

Master of Engineering in Computer Engineering

Toronto, Ontario

Jan. 2024 – Jun. 2025 (expected)

### Western University

Bachelor of Science with Honours Specialization in Computer Science

London, Ontario

Sep. 2019 – Apr. 2023

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, JavaScript, HTML, CSS, C, C++

**Frameworks:** Spring Boot, Node.js, Express, Redis, React, Vue, Maven, Junit, Docker, Mybatis, Lambda, DynamoDB

**Software & Databases:** MySQL, MongoDB, Linux, Git, Gerrit, Jenkins, Postman, AWS, PyTorch, Unity, Jmeter

## PROFESSIONAL EXPERIENCE

### Full Stack Developer Intern

University of Toronto (Interactive Media Lab)

May 2024 – Present

Toronto, Ontario

- Enhanced user engagement by 100% by developing an interactive dashboard with **ReactJS** to visualize performance metrics
- Built, tested, and deployed over 30 secure, scalable APIs, streamlining frontend-backend communication by integrating RESTful services using **Express.js** and **Axios**. Ensured efficient data handling with interceptors and asynchronous fetching for reliability
- Boosted system performance by 30% by introducing Redis to cache frequently accessed data, optimizing **MySQL** response times

### Software Engineer Intern

ZTE Corporation

May 2023 – Nov. 2023

Shenzhen, China

- Ensured **CI/CD** reliability by implementing 300+ test cases with **JUnit**, aligned with iterative development and existing services
- Reduced test execution time by 33% (from 15 to 10 hours) by optimizing 10,000 functional test cases while maintaining coverage
- Led setup and management of **Docker** private repositories and oversaw **Kubernetes** operations for deployment and maintenance

### Research Assistant

Western University

Sep. 2022 – Apr. 2023

London, Ontario

- Researched and developed **GAN-based** solutions to autonomously generate 3D environments for gaming applications
- Built and trained GAN models using **PyTorch** on **AWS EC2**, leading dataset collection, cleaning, and preprocessing

### Software Developer Mentee

The Linux Foundation Mentorship

Jun. 2022 – Aug. 2022

Toronto, Ontario

- Streamlined credential management using **KeyTar** API to securely store and parse user and team configurations into profile lists
- Developed retrieval functionality for SSHConnection objects, encapsulating connection details such as username, password, port
- Delivered secure connection commands on Zowe CLI, enabling efficient and user-friendly profile-based connectivity

### Software Engineer Intern

Shanjian Software Corporation

Jun. 2021 – Aug. 2021

Shanghai, China

- Developed a scalable backend engine using **SpringBoot @Scheduled** for periodic data retrieval, integrating **Hibernate** for seamless object-to-database mapping and efficient data flow
- Ensured code reliability by implementing unit tests using **JUnit** and capturing runtime exceptions logging with **Log4j**
- Enhanced frontend interactivity with **Vue.js** and Element UI, adding dynamic CRUD operations, data tables, and export features

## PROJECT EXPERIENCE

### High Availability Shopping System 🛒

Apr 2024 – Present

- Built a high-availability e-commerce platform using Java and microservice architecture with Spring Cloud, ensuring fault tolerance
- Optimized system performance by integrating **RabbitMQ** for delayed messaging, ensuring reliable order cancellation within 5 minutes, and **Lua** scripts to prevent repeated submission attacks
- Enhanced data reliability and efficiency by utilizing **Redis** as a cache to reduce database pressure, with solutions for cache breakdown, penetration, and avalanche issues using Lua locks, Bloom filters, and randomized expiration times
- Implemented robust DevOps practices, deploying containerized services with Docker and Kubernetes, and utilized tools like Sleuth and Zipkin for distributed tracing and monitoring

### Music Streaming System 🎵

Aug 2024 – Present

- Implemented music streaming platform with user authentication, playlist creation, and music search using the **MERN** stack
- Refined user experience by frontend using **React** and Tailwind, featuring smooth navigation, dynamic playlists, and media controls
- Managed backend services for API development, data storage, and real-time updates to support seamless streaming
- Integrated Spotify API for fetching song data, music playback, and real-time song recommendations based on user preferences