

Leo Zhang



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Summary

Software Engineer with 10+ years of experience in enterprise systems, backend development, and microservices. Proficient in C#, .NET Core, Java, AWS, Docker, and Kubernetes, with hands-on CI/CD and DevOps experience. Delivered scalable, reliable solutions in smart factory platforms, enterprise messaging, and IoT. Master's in Computer and Information Sciences at AUT, focusing on AI and edge deployment.

Skills

- **Languages & Frameworks:** C#, .NET, Java, Kotlin, Python, JavaScript/Node.js, SQL
- **Architecture:** Microservices, RESTful APIs, Spring Boot, Spring Cloud
- **Cloud & DevOps:** AWS, Docker, Kubernetes, Jenkins, GitHub, Nginx, Linux, Azure
- **AI & ML:** PyTorch, TensorFlow, YOLO, diffusion models, LLM integration
- **Databases:** MySQL, PostgreSQL, Oracle, Redis, MongoDB, SQL Server, SQLite
- **IoT & Systems:** MySQL, Redis, MongoDB, SQLite, SQL Server
- **IoT & Systems:** RFID, barcode scanners, sensors, UART/GPIO, protocol adapters

Experience

Virtual Fitting (AI Project) – AUT, New Zealand

2024 – 2025

Independent developer of a multimodal AI virtual fitting system with LLM control and edge deployment capabilities.

- Designed modular workflows combining diffusion models for image generation, YOLO for clothing detection, and LLMs for prompt interpretation.
- Integrated ComfyUI and Dify to orchestrate pipelines, supporting both browser-based and offline operations.
- Optimized inference with Python, achieving low-latency performance on edge devices.

Smart Factory System – Chunxiao Technology, China

2018 – 2024

Technical Lead for a microservice-based enterprise manufacturing platform deployed across 5+ factory sites.

- **Architecture & Backend:** Designed system architecture and led backend development using Java (Spring Boot, MySQL, Oracle, Redis), with CI/CD pipelines built on Docker, Jenkins, and Nginx.
- **Frontend:** Developed the factory management web interface with Vue, implementing production monitoring, equipment management, and access control. Integrated RESTful APIs and WebSocket for real-time interaction with backend services.
- **Cross-Stack Development:** Built C#/.NET services to capture electronic scale data via serial ports and deliver real-time updates to web and mobile clients.

- Mobile: Delivered Android and tablet applications for shop-floor operations and smart locker management, fully integrated with backend microservices.
 - Hardware Integration & Outcome: Integrated RFID, barcode scanners, and conveyor systems for real-time process tracking, improving production efficiency by over 30%.

Enterprise Instant Messaging System – Chunxiao Technology, China 2014 – 2023

Core Android and Backend Developer for an enterprise-scale messaging platform supporting 10,000+ daily users.

- Developed Android client using TCP/UDP protocols and native SDKs to ensure reliable real-time communication.
 - Built backend services with Spring Cloud and C++, enabling scalable and secure message delivery.
 - Designed and integrated subsystems for authentication, messaging, and file management, forming the foundation of enterprise internal collaboration tools.

Other Projects & IoT Solutions – China 2013 – 2023

Full-Stack Engineer involved in delivering a wide range of industrial, IoT, and enterprise applications across multiple domains.

- Completed diverse projects, such as a forestry inspection system with GPS/photo logging, smart locker SDKs (locks, sensors, lighting) using Android + RESTful APIs, and ad scheduling and monitoring platforms for factories and retail displays.
 - Designed and implemented solutions spanning mobile, web, and backend components, ensuring stability and scalability in production environments.
 - Collaborated with cross-functional teams to integrate hardware devices (RFID, sensors, controllers) with enterprise software systems.

Education

Master of Computer and Information Science

AUT, New Zealand

2024 – 2025

Coursework: Big Data, Internet of Things (IoT), Artificial Intelligence

Focus: Artificial Intelligence, Lightweight Model Deployment, Virtual Fitting

Bachelor of Software Engineering

Hebei University of Science and Technology, China

2009 – 2013

Coursework: software engineering, computer science fundamentals, digital electronics, analog electronics, mathematics.

Skills: C, Java, databases, backend system design.

Awarded National Scholarship.

Certifications

- Network Communication Security Administrator Certificate 2017
 - Software Design Engineer Certificate 2019
 - Science and Technology Achievement Award (Intelligent Manufacturing) 2020
 - Full New Zealand Driver Licence 2025