

# Leo Zhang



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## Summary

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Software Engineer with 10+ years of experience in enterprise systems, backend development, and Embedded Systems, IoT integration. Proficient in C#, .NET Core, Java, 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 IOT deployment. Currently transitioning to a Post-Study Work Visa with full working rights in New Zealand.

## Skills

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- **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:** RFID, barcode scanners, sensors, UART/GPIO, protocol adapters

## Experience

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### 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.

## 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

## Core Value

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Versatile Engineer with 10+ years of expertise in hardware-software co-design and a Master's from AUT focusing on AI. I specialize in bridging the gap between low-level embedded protocols and high-level cloud architectures. Currently transitioning to a Post-Study Work Visa (full working rights), I am ready to deliver immediate value to New Zealand's technology sector through robust embedded development and rigorous automated testing.