Xiwei Wang

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Educational Background

University of Waterloo   **09/2025-12/2026**
- Master of Electrical and Computer Engineering (Software Engineering)

Yanshan University   **09/2021-06/2025**
- Bachelor of Electronic Science and Technology, **86/100** GPA

TECHNICAL SKILLS

Languages: C/C++, Python, Java, HTML, CSS, JavaScript, TypeScript, SQL
Frameworks: React, Node.js/Express, Django
Databases: MySQL, Redis, MongoDB
Tools: Git, Linux, Bash, REST

Internship

SELEST Security   **Ontario, Canada**
Mobile Application Full Stack Developer   **09/2025-12/2025**
- Built and shipped a multi-role security concierge app to **platforms (App Store & Google Play)** using **React Native (React) + TypeScript**, managed releases and collaboration with **Git**.
- Implemented **3 sign-in methods** (Email, Google OAuth, Phone) with **role-based access control** across **3 roles (customer/guard/admin)**, including guard request/approval and admin account management.
- Developed booking & shift modules covering **5+ end-to-end workflows** (event creation, guard assignment, incident reporting, profile management, credential uploads) by integrating **REST APIs** with **Node.js/Express** backend services.
- Designed and queried operational data using **SQL/MySQL** for admin review and audit trails; stored flexible app entities (e.g., messages/incident payloads) in **MongoDB** where schema agility was needed.
- Supported **low-latency reads(<47ms)** and frequently accessed state using **Redis** caching (e.g., active shifts, user sessions, admin dashboard views), improving responsiveness for real-time operations.
- Integrated PayPal checkout via backend Functions (**Node.js**) and in-app WebView; persisted payment metadata and booking records in **MongoDB** for reconciliation.

Harbin Institute of Technology Robot Technology Research Institute   **China**
Industrial Vision Platform Development Intern   **06/2025-08/2025**
- Built a real-time industrial inspection application in **C++ with Qt in linux** for teacup defect detection from live camera feeds to detect up to **600 pictures per second**.
- Deployed a local backend service using **Django (Python)** to support detection result logging, model parameter syncing, and offline frame analysis via REST APIs.
- Collaborated with the algorithm team to connect trained models and improved detection speed by **23%**.

Sinopec Group   **China**
Application Intern at the Information Center   **07/2024-08/2024**
- Contributed to 2 projects: unmanned warehouse digital storage system and Robot Control System (RCS), ensuring successful feature delivery and integration.
- Applied reinforcement learning using **Stable-Baselines3 (PPO)** to optimize AGV scheduling and path planning; used **Redis** to cache high-frequency operational states for real-time dispatch.
- Implemented QR/2D-code recognition with **Pyzbar** and connected scanning results to backend services.

Additional Information

Languages: English (fluent), Chinese (native), French (sufficient)