

# Jieru Wang

📍 Beijing, CN    ✉ longge0424@gmail.com

## Education

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### Ocean University of China

*Master of Science in Computer Technology*

Qingdao, CN

*Sept. 2022 – June. 2025*

- GPA: 92.2/100
- **Modules:** Deep learning, Advanced computer architecture, Advanced database systems, Intelligent optimization algorithms, etc.

### Qingdao University

*Bachelor of Engineering in Digital Media Technology*

Qingdao, CN

*Sept. 2018 – June. 2022*

- GPA: 88.4/100
- **Modules:** Computer organization principles, Data structures and algorithms, Computer operating systems, Computer networks, etc.

## Experience

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### Software Development Engineer

🏠 DiDi Global Inc.

Beijing, CN

*June. 2025 – Present*

#### Enterprise Cloud-Native Chaos Engineering Platform

Rebuilt DiDi's enterprise-scale chaos engineering platform to validate microservice resilience and automated fault recovery under high-concurrency production traffic.

- **Cloud-Native Event-Driven Execution Engine:** Re-architected the injection pipeline on Kubernetes CRDs, Go Operators, and gRPC Daemons, delivering asynchronous fault execution with concurrency throttling, idempotent retries, and automated rollback.
- **Kernel-Level Fault Orchestration:** Covered application (Service Mesh latency, RPC errors), middleware (Redis/MySQL connection faults), and Linux kernel layers (tc/netem delay and packet loss, cgroup resource stress).
- **Automated State Consistency & SLO Gating:** Built transactional locking and side-channel verification guaranteeing zero orphaned fault rules on crash, and embedded resilience gates into CI/CD to continuously validate SLOs and expose SPOFs.

#### Intelligent Risk Governance & Incident Platform

Architected an enterprise-grade risk and incident governance platform managing system vulnerabilities, RCA, and fault recovery across company-wide microservices.

- **End-to-End Risk & Incident Pipeline:** Delivered an automated closed-loop pipeline on Go microservices, event-driven DDMQ, and Spark, spanning risk identification, ticket orchestration, and SLA metric tracking.
- **MCP-Powered AI Incident Copilot:** Built agentic LLM workflows on Model Context Protocol (MCP) to auto-derive fault investigation paths, root-cause analysis, and post-mortem reports.
- **Proactive Threat Mitigation:** Shifted the org from reactive manual handling to automated risk discovery, materially cutting online outages and SLA burn.

### Intern Software Development Engineer

*Weifang People's Hospital Smart Healthcare Joint Research Center*

Weifang, CN

*May. 2024 – Aug. 2024*

- **Technology Stack:** Spring Boot, Redis, MySQL, MyBatis-Plus, Python (script call), multithreading, Docker, Vue 3, NgInx
- Implemented a JWT-based physician login system and Redis-based user session management, supporting physician registration and login.
- Used MySQL and MyBatis-Plus for persistent storage of CT information and model paths.
- Used a thread pool to asynchronously call model-generated code, addressing the inefficiency of synchronous model-generated code calls.

- Used Vue 3 and VTK.js to implement 3D scene display on the front end, supporting operations such as surgical puncture simulation. Nginx was used for front-end application deployment.

## Publications

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- [1] **Jieru Wang**, Hui Xia, Lijuan Xu, et al., "DRL-based Latency-Energy Offloading Optimization Strategy in Wireless VR Networks with Edge Computing," *Computer Networks*, vol. 258, no. 111034, Feb. 2025. (JCR Q1; CCF B)
- [2] **Jieru Wang**, "Research on Computational Offloading Strategy Based on Deep Reinforcement Learning," *M.S. Thesis, Ocean University of China*, June 2025.
- [3] Yue Sun, Hui Xia, Chuxiao Su, Rui Zhang, **Jieru Wang**, Kunkun Jia, "A Multi-Agent Enhanced DDPG Method for Federated Learning Resource Allocation in IoT," *Computer Communications*, vol. 233, no. 108066, Mar. 2025. (JCR Q2; CCF C)
- [4] **Jieru Wang**, Yuliang Li, "QSAR Models of 2, 4-Disubstituted Imidazopyridines As Hemozoin Formation Inhibitors," *Journal of Computational Science & Engineering*, June 2021.

## Projects

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### Research on computation offloading strategy based on deep reinforcement learning

Jan. 2024 - Mar. 2025

National Natural Science Foundation of China

- **Technology Stack:** Python, TensorFlow/PyTorch, Deep Reinforcement Learning (DRL), Multi-Objective Optimization
- **Algorithm Design:** Designed a deep reinforcement learning-based computation offloading strategy, employing reinforcement learning for task scheduling and resource allocation optimization.
- **System Implementation:** Implemented intelligent offloading decisions using Python and deep learning frameworks (TensorFlow/PyTorch).
- **Achievements:** Published one CCF-B journal article as first author, one CCF-C journal article, and obtained an invention patent as the first inventor.

## Honors & Awards

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- Full score on the PAT Computer Programming Aptitude Test (A level)
- 270 points on the CCF Software Aptitude Test (top 6.1%)
- Ocean University of China Outstanding Graduate Student Scholarship, Graduate Academic Scholarship, Cultural, Sports, and Social Work Scholarship, Qingdao University Outstanding Student Scholarship, Academic Scholarship
- Gold medal in the China College Student Programming Contest (CCPC)
- First prize in the China University Computer Contest - Team Programming Ladder Competition
- A method and device for computational offloading (invention patent, 202410810837.6)

## Skills & Specialties

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**Languages:** Mandarin/Chinese (Native), English (IELTS 6.5/6.5)

**IT Skills:** Highly skilled backend developer with primary expertise in Go (microservices, distributed systems) and Python (data engineering, Spark). Also holds in-depth knowledge of Java (Spring, concurrency), database management (MySQL, Redis), and DevOps tools (Docker, Git, Linux).