WENJUN YU

Experienced C++ Developer | Backend Engineer

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Summary

Experienced backend engineer with a strong background in C++ development. Proven track record in building scalable, high-performance systems and services. Skilled in optimizing code, resolving complex issues.

Skills

Skillset
Advanced algorithms & Data structures, STL, Design Patterns, PostgreSQL, Linux, DevOps, Docker, Git, Kubernetes, Requirements Analysis, Memory leak detection, Advanced debugging and troubleshooting, Performance profiling and optimization, Core dump analysis, Multithreading issues diagnosis, Static and dynamic code analysis

Programming Languages
C++(Proficient), Python(Familiar), Shell(Familiar)

Language
English (Fluent), Chinese (Native Speaker)

Education

Nanjing University 09/2018 - 06/2021
Master Of Optical Engineering College of Physics

Anhui University of Technology 08/2013 - 06/2017
Bachelor Of Materials Engineering School of Materials

Experience

ZTE corporation 06/2021 - 02/2024
Software development engineer Nanjing

- Developed and maintained core modules for the 5G Core Network Public Service System - OAM Project, focusing on data synchronization and configuration management
- Led code reviews, identifying and resolving critical issues to ensure code quality and prevent potential faults, improving overall system reliability
- Participated in the OAM High-Reliability Architecture Improvement - Configuration Architecture Optimization project as a key developer. Filled the gap in offline data consistency comparison functionality, significantly enhancing system reliability
- Experienced in resolving memory leaks using open-source tools such as Valgrind and diagnosing core dump issues with Crash
- Skilled in leveraging tools and code to reduce repetitive tasks, developed the BM CAAS environment automated deployment tool to enhance project efficiency
- Developed FT design of data sync module; successfully created the FT module from scratch

Projects

High-Frequency Trading System 03/2024 - Now
Independently designing and developing a cutting-edge high-frequency trading system with industry-leading performance

- Architected modular system using advanced C++ (C++17) and key design patterns:
  - Observer for event-driven architecture
  - Factory method for flexible algorithm creation
  - Strategy for interchangeable trading strategies
- Implemented ultra-low latency event bus with lock-free queues
- Optimized WebSocket for high-throughput market data and order execution
- Implemented memory-mapped file I/O (mmap) for persistent storage, leveraging kernel-level page cache for asynchronous, low-latency disk operations, minimizing I/O bottlenecks and system latency impact.
- Key Performance Indicators:
  - Order execution latency: Consistently < 50 us
  - Message processing throughput: > 1k messages per second
- Tech stack: WebSockets, Lock-free algorithms, Memory-mapped I/O, SIMD optimization, Event-driven architecture

Ultra-low latency systems, Concurrent programming, Design patterns, Kernel-level optimizations

XTP quantitative transaction interface subscription application 05/2023 - 03/2024
Independent developer

- Independently developed a C++ project for an XTP quantitative trading interface subscription application. This project efficiently subscribes to the XTP API and obtains stock market information from securities exchanges through low latency and high concurrency means, achieving strong performance and scalability
- The application can help traders carry out strategic analysis and trading, providing them with more convenient and reliable services, and is a very practical tool. I was independently responsible for the entire development process of the project, including requirements analysis, design, development, testing, and deployment, and achieved satisfactory performance