Chenwei(Allen) Gu

2024 Summer Software Engineer Intern

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Education

Duke University   Aug 2023 – May 2025
Master of Engineering in Computer Engineering (Software Engineering Track)   *Durham, NC*

Wuhan University of Technology   Sep 2019 – Jun 2023
Bachelor of Engineering in Computer Science   *Hubei, China*
- 4.3/5, 93/100, National Merit

Technical Skills

Programming Languages: Golang, Java, C/C++, Python, Linux Shell, JavaScript, HTML/CSS
Frameworks: Gin, gRPC, Spring, Vue.js, React.js, Gorm, Mybatis, Hibernate
Databases: MySQL, MongoDB, Redis, ElasticSearch, SQLite
Tools: Git, Docker, Kubernetes, AWS, Linux, RabbitMQ, Nginx
Courses: Data Structures, Computer Networks, Computer Architecture, Operating Systems, Distributed Architecture

Experience

Bytedance Ltd.   Jun 2022 – Aug 2022
Software Engineer Intern   *Shanghai, China*
- Assisted the team in developing the leave management system for over 100k employees within the company.
- Developed microservices with Golang RPC framework and database framework Gorm, and secured all data with transactions.
- Deployed codes into Docker containers and managed them centrally through Kubernetes.
- Conducted code functional and performance testing with Golang Test framework on about 2k lines code with over 85% coverage.
- Improved overall code execution speed through caching, thread pooling and asynchronous programming.
- Collaborated on multi-person programming by Git and GitLab.

Huawei Technologies Co., Ltd. (University-Enterprise Cooperation Program)   Sep 2021 – Jan 2022
Test Developer Intern   *Hubei, China*
- Assisted developers in optimizing internal function libraries for mobile phone chips by building testing environment with CMake and C++ testing framework Google Test (GTest).
- Conducted functional and performance testing on hundreds of lines code in Linux environment with C++ and Linux Shell.
- Implemented automated testing with over 500k data by Python.

Projects

Online Medical Consultation Platform (Graduate Design) | *Golang Software Developer*   Mar 2023 – May 2023
- Built a web consultation platform by Vue.js, Gin, and Gorm frameworks, with MySQL as databases and Redis for caching.
- Optimized search functions with ElasticSearch to increase the speed of search by about 30%.
- Developed a web instant messaging platform with WebSocket and used MongoDB to store conversation logs.
- Improved system concurrency using Goroutines and RabbitMQ, and used Nginx for load balancing.

NFT Analysis System (Zhejiang Univ Summer Camp Program) | *Software Developer*   Jun 2022 – July 2022
- Crawled thousands of NFT data from websites like Opensea, Axie Marketplace using the Python framework PySpider. Preprocessed the data and stored it in MySQL.
- Developed the system using Spring Boot for the backend, React.js + Bootstrap for the frontend, and MySQL as the database.
- Implemented risk and security detection for various types of NFTs using AliCloud's content detection API.

Blog Sharing Website | *Java Software Developer*   Sep 2021 – Oct 2021
- Developed the website using Vue.js, SpringBoot, and MyBatis frameworks, with Cloud MySQL.
- Implemented permission management with JWT and Spring Security, and used Redis to store JWT tokens.
- Implemented quick search for 2 million blogs based on ElasticSearch.
- Improved system concurrency and lower the latency by thread pooling and RabbitMQ.
- Splitted the whole big project into several sub-projects and unified them through Maven.