Junhui Zhu

daniel.zhujunhui@gmail.com | jhzhu.xyz | junhui-zhu

Education

National University of Singapore August 2022 – December 2023 (Expected)
Master of Computing in Computer Science Singapore

Shanghai Jiao Tong University September 2018 – June 2022
B.Eng in Industrial Engineering Shanghai, China

- **Coursework**: Introduction to Computer Systems (**ICS**), Operating Systems (**OS**), Computer Systems Engineering (**CSE**), etc.
- **GPA of CS-related courses**: 3.78/4.3 (88/100)

Internship Experience

Undisclosed Hedge Fund July 2022 – Now
Software Engineer Intern Singapore

- Developed a service based on Elasticsearch for internal discussion of issues.

BrightRidge Investments September 2021 – March 2022
Quantitative Developer Intern Shanghai, China

- Built different modules like trading gateway, the entry of market data and docked them with strategy programs with Node and Cpp addons. Adopted IPC mechanism for communication and kept the average latency (from local to the exchange) within 30 millionseconds.
- Implemented the mechanism of serialization and unserialization of fincial signal forecaster with Meta-class in Python.
- Implemented the alert mechanism detecting the improper resource usage of clusters with InfluxDB and Grafana as well as catching error logs with Loki and Prometheus.

Meituan, Ltd. June 2021 – September 2021
Backend Engineer Intern Beijing, China

- Traced the call stack of slow RPCs and explored speed bottlenecks. After refactoring or rewriting them, the average response time sped from 500ms to 50ms.
- Cooperatd with PMs and frontends, responded to user requirements, read PRDs and wrote backend logics.

Projects

Raft with Go June 2022

- The lab project of MIT 6.824 **Distributed Systems**.
- use Golang RPC lib and Goroutines to implement a lightweight Raft library and passed the tests provided by MIT 1000 times.
- Plan to rewrite with C++.

TCP library based on Linux IP layer with C++11 April 2022

- The lab project of Stanford CS144 **Computer Networks**.
- Decoupled the state of the entire TCP connection into a tuple of TCP sender and TCP receiver states, resulting in a more elegant implementation of state transfer.

Compiler Frontend for Simplified C September 2020 – November 2020

- Simplified the C language by fixing the size of variables.
- Tokenized, analyzed and parsed the programs into an abstract syntax tree.
- Directly translated the AST into x86_64 assembly code, which could be assemblied to ELF by gcc or clang.

An Interest-based Community July 2020 – September 2020

- The project of course **Web Development**, written in React.TS and Spring Boot.
- Deployed with Docker and could be transplanted anywhere.

Skills

Programming Languages: C++, C, Golang, Java, Python, TypeScript and Node.js
Tech Skills: Linux, AWS, Docker, web development – full stack, infrastructures – C++ or Golang
Languages: Chinese - Native Speaker, English - Fluent