Fenglyu Lin

- Email: fenglyu.lin@gmail.com
- Phone: +65-87700533, +86-13379939042
- Location: Singapore, China Mainland
- Blog: https://colalinn.github.io/

Education

Wuhan University, China (2017 - 2021)

- Major in Information Security; Bachelor's Degree in Engineering
- GPA: 3.68/4.0; Academic rank 29/103; Overall rank 5/103

Achievements & Honors

- Excellence Scholarship First Prize of School of Cyber Science And Engineering (top 5%) 2021.06
- Outstanding Graduate of Wuhan University(top 10%) 2021.05
- Third Price of Works Competition in National College Student Information Security Contest 2020.08
- National Endeavor Scholarship(top 20%) (3 times) 2018~2020
- Second Class Scholarship of Wuhan University(top 15%) (3 times) 2018~2020

Knowledge & Skills in Computer Science

- [Core knowledge/Course] The Data Structures and Algorithms(94); Computer Networks(92); Database Principles(93); The Principle of Computer Organization(91); and Operating Systems(86).
- [Advanced Knowledge/Course]:
  - [AI] Stanford-CS231n (Deep Learning);
  - [Networks] MIT-6.824 (Distributed System); Designing Data-Intensive Applications;
  - [HPC] HPC(High Performance Computing); Parallel Computing;
  - [Security] Infomation Security; Software Security; Reinforcement Deep Learning;
- [Familiar Program languages] Go, Python, Java and C.
- [Leetcode] Have passed over 200 questions.

Work Experience

(Full Time) Software Engineer @ Shopee Singapore (August 2021 - Present)

I am working in Order Team(Core Dev team in Shopee) and I am now mainly in charge of the Order Fee and Seller Wallet services.

1. Design and develop the Shopee Order Fee System, including five types of Seller Fees (Service Fee, Commission Fee, Transaction Fee, and Campaign Fee), an order Buyer Service Fee, and a fee rule configuration platform for business team's operations.
2. Develop and maintain the Shopee Seller Wallet, which involves efficient wallet management, withdrawal handling, accurate balance management, and other essential functionalities. It serves Shopee's sellers.
3. Collaborate closely with other engineers and teams to ensure seamless order processing, accurate order fee charging, and a smooth user experience for buyers/seller.

Project

RPC Framework

The implementation of this framework includes the principle of RPC, Socket, and Netty, a variety of serialization and load balancing algorithms, Nacos based service registry. The detials are as follows.

1. Java native serialization has vulnerabilities, Json serialization is inefficient \ error-prone: the use of Kryo serialization
2. The load balancing in distributed systems: the implementation of random algorithms and rotation algorithms
3. Native Socket is inefficient: Iadded Netty network transfer, custom communication protocol
4. Distributed: through Nacos to achieve registration
5. Service registration and deregistration is not concise: automatic registration of services by annotation, automatic deregistration of services by hooks.

Outcome: The server can automatically register Nacos, distributed to provide services. The client discovers the service and consumes to get the result through a dynamic proxy. Good interface abstraction, low coupling, network transfer, serializer, load balancing algorithm are configurable.