

# DUAN LI

Email: [liduan2000@gmail.com](mailto:liduan2000@gmail.com)

Mobile: +65 80380270 / +86 18137159323

## EDUCATION BACKGROUND

### National University of Singapore

Aug 2023 - Jan 2025

Master of Computing

- GPA: 4.6 / 5.0

### Southeast University

Aug 2018 - Jun 2022

Bachelor of Automation (Intelligent Information Processing)

- GPA: 3.76 / 4.00 (88.66 / 100) (Top 5%)
- National patent: Dental veneer model generation and thickness measurement method based on oral scanning point Cloud

## PROFILE SUMMARY

Portfolio: <https://liduan2000.github.io>

Github: <https://github.com/liduan2000>

Linkedin: <https://www.linkedin.com/in/duan-li-14b0bb216>

## PROFESSIONAL EXPERIENCE

### Tencent Games – Level Infinite

May 2024 - Sep 2024

Software Development Engineer - Intern

- Deeply evaluated various distributed frameworks (Nacos, Consul, Zookeeper, Eureka, Etcd, etc.) and strategically selected Consul for unified service registration, discovery, and health checks across CVM and Kubernetes environments. Utilized Consul KV for storage of service configuration, routing, and weight information.
- Redesigned Tencent's load balancing and service discovery framework, as well as the configuration center agent. Implemented real-time updates of config and routing information stored in Consul to configuration center agent, shared memory, and subsequently loading it into the load balancing agent. Led solution evaluation, development, self-testing, and benchmark testing. Successful deployment across both CVM and Kubernetes environments.
- Implementing mTLS(HTTPS mutual authentication) on load balancers in TCC, AWS, GCP, and Azure, replacing manual IP whitelisting. Tested the functionalities of mTLS, certificate revocation, periodic certificate rotation, and multi-certificate chains. Additionally, developed a backup strategy by leveraging Cloud LB to forward Layer 4 requests to an Nginx server, where mTLS functionalities were configured on Nginx.

### Monetary Authority of Singapore

Dec 2023 - Jan 2024

Software Development Engineer - Intern

- Researched content management systems and developed a new Umbraco CMS microservice from scratch within the microservices-based MAS financial trading management platform, customized to deploy MS SQL Server. Provided essential content management functionality for other business modules in the system.

### Intel Corporation

Jul 2022 - May 2023

System Software Development Engineer

- Developed a Linux kernel-space device management driver and a user-space device simulator (C/C++), using interrupts to verify the behavior of the device simulator. Led solution formulation, architecture design, module development, and integration testing. Ensured stable operation of the driver on next-generation server CPUs (GNR).
- Optimized data-parallel algorithms for Intel's high-performance GPU architecture using oneAPI, rewriting portions of the parallel algorithms with SYCL (C++). Achieved a 5 to 10-fold reduction in runtime for previously cross-platform parallel algorithms on PVC GPUs. Based on the assembly code of the parallel algorithms, proposed effective improvements for the next-generation PVC GPU compiler.

### Tencent Technology

Feb 2022 - May 2022

Software Development Engineer - Intern

- Contributed to the development of the Cloud Xiaowei Open Platform and voice assistant microservice modules, utilizing the trpc-go framework for service communication. Developed protocol integrations for speech recognition, semantic parsing, and speech synthesis modules. Additionally, managed Redis data migration and cluster deployment.
- Refactored the sports open capability module from C++ to Go services. Spearheaded the project for visually impaired programmers, coordinating with company representatives to provide Python cloud development tutorials on the open platform, while gathering feedback on accessibility support for the Cloud Xiaowei Open Platform.

## Alibaba Group

Jun 2021 - Aug 2021

Software Development Engineer - Intern

- Developed a lightweight JavaScript compilation engine backend for the Taobao app, focusing on optimizing performance. Led the development of instruction bytecode and JIT compilation modules, achieving a 10% increase in execution speed and enhancing resource efficiency by 7%.
- Developed the file clean-up module for online bypass repair using Kotlin, overseeing the processing of handheld local and platform-delivered files in real-time, aligning with dynamic business push data to achieve seamless hot repairs, resulting in a 15% improvement in repair response times.

## PROJECTS

### OfferAI – Job Seeking Assistant

May 2024 - Present

Software Developer

- Link: <https://offer-ai.net>
- Tech stack: Python, Flask, MySQL, Redis, MongoDB, Kafka, Nginx, Docker, Websocket, JWT, OpenAI.
- A job-seeking assistant platform allowing users to register and utilize AI-based features such as resume enhancement, job recommendations, interview preparation, cover letter generation, and job applications. It also provides comprehensive job application tracking, job search, and matching functionalities.
- Responsible for backend development, REST API design, database schema creation, and platform promotion. Developed using Flask with MySQL for storage, Redis for caching and MongoDB for resume data. Also trained and fine-tuned custom models based on OpenAI technology.

### Rate Corner – Course Rating Platform

Feb 2024 - Present

Project Leader

- Link: <https://ratecorner.org>
- Tech stack: Java, Spring Boot, Spring Task, Spring Cache, Mybatis, Redis, MySQL, JWT, Swagger, Nginx, React, Typescript.
- A course evaluation platform allowing students to register, provide course evaluations, view and filter other course reviews, and manage users' own assessments. Widely used by NUS students, the platform has garnered thousands of favourites on social media promotional posts.
- Responsible for task scheduling, solution implementation, prototype design, REST API design, database schema design, backend development, service deployment, and promotional activities.

### Tianjiang Food Delivery Platform

Oct 2023 - Jan 2024

Project Owner

- Link: <https://github.com/liduan2000/sky-take-out>
- Tech stack: Java, Spring, Spring Boot, Spring Task, Mybatis, Redis, MySQL, JWT, Swagger, WebSocket, Vue.
- The project is a customized software product specifically designed for catering enterprises such as restaurants and hotels. It comprises a system management platform and a mini-program application on the client side.
- Merchant Management Platform: Enables merchants to manage employees, orders, store status, packages, categories, and menu items, with statistical and visualization features for restaurant data.
- User-Side Mini-Program: Allows users to browse dishes online, add items to the shopping cart, place orders, make payments, and request order status updates.

## CORE COMPETENCIES

- Programming (Java, Python, C/C++, Golang, JavaScript, SQL)
- Software Dev (Micro Services, Sidecar, Spring Framework, Flask, Redis, Docker, Kubernetes, MySQL, PostgreSQL)
- Linux, Multi-thread, GPU Parallel computing, Bash, Git
- Big Data (Hadoop, Spark, Kafka, Flink)
- AI (Machine Learning, Computer Vision)

## CERTIFICATIONS

- The second prize of National Computer Design Competition
- Special Prize of Jiangsu computer design competition
- Second prize of Southeast University computer design competition
- Puxin Elite Scholarship