Kaipeng Wang

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Education

Johns Hopkins University, MSE in Computer Science — August 2023 – May 2025

- **Coursework:** Computer Architecture, Artificial Intelligence, Computer Network, Blockchain, Parallel Computing.

Henan University of Technology, BS in Internet of Things — August 2019 – July 2023

- **Coursework:** Operating system, Data Structure, Algorithm Analysis and Design, Object-oriented programming basics.

Work Experience

Alipay, Software Engineer – HangZhou, China — Jul 2023 – Jan 2024

- Improved labelling efficiency of Alipay fund supply management by automating label management through API calls, reducing manual effort and error rates.
- Improved efficiency of Alipay fund recommendation words by 40% through 0-to-1 construction of the AIGC keyword system.
- Ensured users only see funds meeting their criteria by implementing keyword-based recommendation and filtering for Alipay funds.

Dora, Software Intern Engineer – Beijing, China — Jul 2022 – Jan 2023

- Prevented excessive ElasticSearch sharding by consolidating 1000 projects into a single sharding using "esIndexId" field.
- Enhanced system logger efficiency by implementing log tracing system using unique traceIds for request correlation in ES.
- Developed no-code Groovy scripts via a custom scripting engine, enabling email verification, copy information without code.
- Improved project architecture by implementing workspace concept and logic to ensure Multi-person synchronization.

JD.com, Software Intern Developer, Inc – Beijing, China — Sept 2021 – Nov 2021

- Implemented interfaces for JD's new credit platform and modifications, and ensure the data consistency.
- Developed and deployed "Chaos Blade," an internal platform at JD to ensure program under load during promotion period.
- Utilized SQL queries to count and analyze the number of users who failed to access the system within specific time periods, leading to a 25% improvement in error detection and resolution efficiency.

Projects

GoRedis — GitHub Repo

- Developed a Redis server implementation in Go, supporting the RESP to ensure compatibility with existing Redis clients.
- Optimized multi-client connection handle using Go concurrency features, enhancing server performance in high-concurrency.
- Implemented core Redis commands and data structures—such as strings, lists, and sets—to meet common caching and in-memory database use cases.
- Implementing AOF (Append-Only File) data persistence to prevent data loss due to server restart.

Clue-Less Game — Online Display

- Implement third-party login using OAuth (GitHub, Google).
- Designing the storage of user actions using JSON (e.g., current location, movement direction, game items).
- Deploy the project using PaaS (Vercel).
- Tools Used: JavaScript, Next.Js.

hertzbeat — GitHub Repo

- Enhanced string processing logic by refactoring algorithms and implementing multi-threading using Java's concurrency features. This optimization reduced processing time by 30% when handling datasets, significantly improving efficiency.
- Optimized unit tests (UT), increasing test coverage from 70% to 90%, leading to more robust and reliable code.
- Implemented a WeChat alerting feature, enabling instant notifications and improving response times at time.
- Improved user login authentication mechanisms by implementing multi-factor authentication (MFA) and enhancing password hashing algorithms using bcrypt, which enhanced security

gson — GitHub Repo

- Fix errors in time caused by different time zones.
- Modify Date Format-related content.

Technical Skills

Software: Java and related frameworks (such as Spring Boot), Go.
Middleware: MySQL, PostgreSQL, Redis, RabbitMQ (or similar like RocketMQ), Nginx.