Long Nguyen Thanh Le

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Skills

Programming C, C++, Java, Shell, MySQL, Python, LaTeX
Operating Systems: Linux
Software Netbeans, Visual Studio, GDB, PyCharm
Languages Vietnamese (native), English (professional)

Experience

Lead Backend Software Engineer
Ho Chi Minh City, Viet Nam

Zalo Group
07/2018 - Present

- Maintain and improve back-end database services serving with 54 million active users monthly, 1.5 billion messages daily
  - Maintain services' performance as the number of active users increases while taking server usage (network, disk IO, CPU, RAM) into account
  - Implement new features and improve overall performance for back-end database binaries in C++
- Implement a QoS system focusing on accuracy, real-time responsiveness to minimise services' downtime thus impacts on the whole system
- Design Key-Value database architectures supporting Zalo features
  - Discuss and decide with requesting teams how a database for their features should be with their input on estimated request rate and the importance of the feature
  - Review running systems on performance, latency, scalability, and availability
- Research on possible alternatives for storing data, especially media data such as images, videos, etc.

Projects

SPECtate
2018 - present

- Analyzed source codes given by the sponsor for insight understanding
- Cooperated with the requirement team to refine and complete project documentations
- Designed story boards and contributed for the GUI development of the project in Python
- Collaborated with Agile team through peer and mentor code review for testable, maintainable, and quality-focused code

Secured Internet Relay Chat
2017

- Pair-developed IRC client and server using socket and multi-thread programming in Java
- Implemented rooms management, conversations, file transfer, private chat rooms, and secured messages
- Wrote the document for functions of the IRC in RFC-style

XV6 Operating System
2017

- Implemented new system calls, user commands, and file system protection for better usability of the OS using C
- Improved the scheduling process of the OS in term of fairness

Matching Algorithm in Ridesharing Problem
2016

- Researched related works and algorithms regarding path finding and matching problems
- Implemented the graph structure for conducted experiments in C++
- Cooperated with teammates and conducted experiments based on Dijkstras, Floyd-Marshall, and Hungarian algorithms with different input settings

Education

Portland State University
Portland, OR, USA

B.S. in Computer Science
09/2016 - 06/2018

- GPA: 3.58
- Elective courses: Computer Security, Machine Learning, Malware, Internetworking Protocols, Database Systems

Ho Chi Minh City University of Science
Ho Chi Minh City, Vietnam

B.S in Computer Science
10/2014 - 08/2016

- GPA: 3.62
- Advanced Programs in Computer Science

Honors & Awards

2020 **Employee of the Year,** Zalo *Ho Chi Minh City, Viet Nam*