Yue Li

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Shanghai
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23 | Female

EDUCATION

Shanghai Jiao Tong University Sep 2022 - Mar 2025
Software Engineering Master Software Academy
GPA: 3.83/4.0

Nanjing University Sep 2018 - Jun 2022
Software Engineering Bachelor Software Academy
GPA:4.52/5.00
rank: 14/235 (top 6%)

HONORS & AWARDS

Shanghai jiaotong university first-class academic scholarship	2023
Outstanding graduate of School of Software, Nanjing University	2022
Outstanding student of the School of Software, Nanjing University	2021
Dong's Oriental Scholarship (high, top 3%)	2019
Paypal Scholarships (high scholarship, top 10%)	2020
Outstanding Communist Youth League member of Nanjing University	2019

Other project experiences

Neuromorphic Hardware Simulator Based on RRAM Crossbar

- C++ , systemc
- I designed and implemented a user-friendly neuromorphic hardware simulator.
- This simulator accurately models a neuromorphic hardware system using RRAM crossbar architecture. I built it with systemc, focusing on easy-to-understand simulation of each component's role and interaction.

Development of a highly available system based on NeuronOS.

- C++ & Golang
- I have worked on enhancing reliability for tasks run by Spiking Neural Networks (SNNs) on neuromorphic hardware, a relatively new area. My work has improved the ability of these systems to accurately detect and respond to irregularities across different situations.
- I created a system for running SNN tasks that can sense its environment, spot issues, and manage them without interruption. This involved setting up a system to save and restore the state of SNN tasks, which helps them recover quickly from disruptions.
- Using C++, I developed an Agent that operates directly on the same device as the neuron operating system. For backend operations, I used Golang, and I chose InfluxDB as the time-series database to reliably store monitoring data.

OpenGauss database features intelligent conversion between row storage and column storage

- OpenGauss Database & JDBC
- I set up a smart system to monitor the usage frequency of tables in OpenGauss databases, automatically converting frequently accessed tables to row format and less accessed ones to column format within a single transaction.
- By leveraging OpenGauss's columnar capabilities, I enabled routine data compression, which sped up small read operations and reduced memory usage.
- I carried out OLTP tests using JDBC to mimic activities on tables with different usage frequencies, processed in dense, small batches. The results demonstrated that dynamically switching between row and column formats can cut down operation time by 30% versus using only columnar tables. It also conserved about 23% of memory while maintaining a similar execution speed when compared to fixed row storage.

Distributed File System with SmartNICs

- C language
- In a multi-tenant system's distributed file system, I tackled the problem of high CPU usage by delegating some computing work to intelligent network cards. I set up pipelines for copying and distributing data, reducing the load on the central CPU and improving the file system's overall performance.
- Within the LevelDB framework, my replication system cut down the time it takes to write data by 60% when measured against the Assise system.

PROJECT EXPERIENCE

Lianyungang Sifang Geomatics Engineering Company Feb 2021 - Mar 2021
Android mobile application development

- Android + Java
- We developed a task tracking app for Android to help a surveying company streamline their workflow. Our app addresses the issue of tasks getting overlooked at various stages, from allocation to client submission. This solution has improved progress tracking and is actively used by around 30 users.

Microsoft Outlook Jul 2021 - Oct 2021
SDE Intern

- React + Golang
- I participated in completing a collaborative online whiteboard project for online meetings, primarily responsible for frontend page development and implementing backend code.

SKILLS, CERTIFICATIONS & OTHERS

- **Languages:** English (CET-4):613, English (CET-6):590