

Chi Le

charles.chi.le@outlook.com | github.com/charleschile | charleschile.com | linkedin.com/in/chi-charles-le

Education

Duke University, Pratt School of Engineering

2023/08 – 2025/12

M.Eng in Electrical and Computer Engineering (Software Development concentration)

Durham, NC, USA

- **GPA: 4.0/4.0**, Duke campus ambassador
- Core Course: Software Engineering, Systems Programming and Engineering, etc.

Zhejiang University, ZJU-UoE Institute

2019/09 – 2023/6

B.Sc. (Hons) in Biomedical Sciences

Zhejiang, China

- **GPA: 3.82/4.0**, Junior Year Student Academic Representative
- Related Courses: Computer Organization, Cognition and Artificial Intelligence, Data Analysis and Machine Learning

Skills

Programming Languages: C/C++, Java, Golang, Python, Verilog, SQL, R, HTML/CSS/JS, Rust

Tools & Framework: MySQL, LaTeX, Linux, Git, Spring, SpringBoot, SpringMVC, Pytorch, Node.js, Shell, GDB, Mybatis, Maven, Gradle, Redis, WebSocket, Junit, Typst

Languages: Mandarin and Shanghainese (Native), English (Proficient)

Internship Experience

Meituan

2024/05 – 2024/08

Software Engineer Intern, Advertising Engine Team

Beijing, China

- Completed a **Thrift RPC** interface to retrieve IDs from word list based on keywords and weighted scores, with periodic index updates. Optimized **JVM** parameters and **Redis** caching, boosting QPS capacity from 500 to 2000, reducing response time to 17ms.
- Developed the **Java** backend for Meituan's medical brand ads in the food delivery search, dynamically allocated ad displays based on pricing rules in mixed intent scenarios, with an estimated annual revenue potential of 2.7-3.6 million Dollars.
- Optimized recall ranking rules and second-price billing calculations for flash sale ads, resulting in an additional revenue potential of 26,000 Dollars per day.

Open Source Experience

MatrixOrigin

2024/05 – 2024/10

Database System Research & Development Intern

Remote / San Jose, CA, USA

- **Active Contributor of MatrixOne**[[Pull Request #18470](#)]: MatrixOne is a distributed database system designed for high-performance, real-time analytics, featuring a unified storage and compute architecture with strong consistency and horizontal scalability.
- **Document LLM Support Functions:** Implemented `EXTRACT_TEXT`, `EMBEDDING`, and `CHUNK SQL` functions for document LLM support in MatrixOne. Enabled automatic document chunking and vectorization by using LLM models.
- **LLM Secondary Index Implementation** [[Pull Request #17609](#)]: Developed the LLM secondary index in MatrixOne for advanced LLM-based queries. Developed two hidden tables to support data linking, vector embedding, and document retrieval based on vector distance comparisons. Utilized dynamic SQL construction for table creation, ensuring seamless integration and efficient data handling for large-scale language model operations. The index is fully compatible with CRUD operations.
- **MySQL-Compatible Encode/Decode Functions** [[Pull Request #17568](#)]: Pioneered the implementation of encode and decode SQL functions in MatrixOne, developing AES-based encryption and decryption in Go, and ensuring robust performance with SHA256 and comprehensive testing.

Personal Project

Customized-Device Community Order System

2023/10 – 2024/01

SpringBoot + MyBatis + MySQL + Redis + JWT + WebSocket

- The implemented client system is capable of processing customized product orders, managing shopping carts, providing order placement notifications, handling coupons, and more. The backend management system is designed to manage products and staff.
- By utilizing Redis for data caching, query times have been optimized from an average of 137ms to 29ms. Additionally, a Bloom filter has been implemented to address cache-related issues.
- Data consistency issues are tackled through strategies like lazy deletion and proactive updates, while optimistic locking is used to prevent overselling issues.
- Nginx is employed as the HTTP server, set up for reverse proxy and load balancing. Data transmission to the frontend is facilitated through WebSocket, enabling real-time order notification features.