

YI ZHAO

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Experience

Salesforce (Tableau)

Jan. 2023 – Present

Software Engineering Senior MTS

Seattle, WA

- Designed, developed, and maintained Tableau's Data Query Engine, enabling Tableau's core capability to translate Visualization object into optimized SQL queries for execution, achieving 99.9% SLA under **1000+ QPS**
- Designed a hybrid Java Cpp architecture to combine Java's scalability as a server with Cpp's efficiency for data-intensive computing, utilizing the **gRPC** protocol for high-performance bidirectional data streaming communication
- Spearheaded Data Query Engine cloud migration, implementing **multi-AZ availability, auto scaling, DNS-based service discovery, sticky sessions, and cross-account resource accessing** for enhanced reliability and scalability
- Implemented a scalable microservice with RESTful APIs to support programmatic queries against Tableau Published Data Sources, enabling Tableau to function as an **OLAP** platform for customizable visualizations and applications
- Established an end-to-end testing pipeline using **GitLab CI** and **JetBrains TeamCity**, fully automating post-commit testing workflows for improved quality and faster delivery

ByteDance

July. 2020 – July. 2021

Software Engineer

Shenzhen, China

- Implemented a scalable, resilient micro-service backend architecture with **Spring cloud, Spring boot** for the high frequency online transaction and procurement, achieving 99.99% SLA
- Proposed and implemented technical solutions to refactor a monolithic application into micro-service architecture, integrated **RocketMQ** and Seata (from Alibaba) Framework to ensure distributed transaction consistency
- Implemented a multi-level efficient text query architecture over 10 million goods data with **Redis, Elasticsearch** and well-constructed index, reducing API average response time by 90% (from 5s to <0.5s)
- Used **Jenkins** (ByteCloud) pipeline to build artifacts, push to **Docker** registry and deploy to **Kubernetes**; Monitored online services and performed troubleshooting with jstack, jmap, Kibana, Skywalking, jProfiler and Arthas

Education

Rice University

Sept. 2021 – Expected Dec. 2022

Master of Science, Computer Science (GPA: 4.00/4.00)

Houston, TX

Southern University of Science and Technology

Sept. 2016.09 – July. 2020

Bachelor of Science, Computer Science and Engineering (GPA: 3.89/4.00, rank: 1/146)

Shenzhen, China

Open-source Contribution

Nimbus-JOSE-JWT

- Enhanced the JWTClaimsSet API by implementing a getClaimAsString utility to streamline the extraction of registered and custom claims
- Integrated comprehensive unit tests to validate edge cases, including null handling and illegal type conversions

resilience4j

November 2020

- Standardized the behavior of Runnable decorators to match Supplier and Callable implementations, ensuring predicates are correctly evaluated for retry logic even in void-returning operations
- Improved the library's fault-tolerance capabilities by allowing developers to trigger retries for background tasks based on custom result predicates

ThreadLocalCache | Java, Spring, AspectJ, Gson, Guava

January 2021

- Designed and implemented a universal solution for caching and accessing time-consuming RPC or HTTP invocation results within thread, avoiding duplicated queries to be issued within the lifetime of a worker thread
- Integrated with **Spring WebMvcConfigurer** to actively control the creation and destruction of ThreadLocal caching object, avoiding Out of Memory Crashes

Honors and Awards

Spot Bonus for Outstanding Work, ByteDance

March. 2021

Bronze Medal, ICPC East-Asia Continent Final

Dec. 2018

Technical Skills

Programming Languages: Java, C++, TypeScript, JavaScript, SQL, Shell

Tools and Frameworks: Spring, React, Redux, Jasmine, JUnit, Mockito, Git, Docker, Kubernetes, Jenkins, Spark

Middleware and Systems: MySQL, PostgreSQL, Elasticsearch, Redis, RocketMQ, Kafka

Programming Capabilities: Data Structure, Algorithm Design and Analysis, Object Oriented Design, Test Driven Design (TDD), Domain Driven Design (DDD)