Xiaohu Zhang(章筱虎)

Gender:Male Birth: June. 1988 Tel: +6584176559 Email: silver9886@126.com
Current Position: software architect

Education

- 2010/09 ---2012/07 WuHan University Computer Application Technology Master
- 2005/09 ---2009/06 HeNan University Mathematics and Applied Mathematics Bachelor

Computer Skills && English Skills

- Master golang language
- Master the Java language and Spring framework, capable of extending Spring for customized development
- Proficient in reactive programming methods and skilled in using Spring WebFlux, capable of choosing asynchronous programming based on specific applicable scenarios
- Submitted code multiple times to Apache top-level open source projects, which has been merged into the main branch
- Master multiprocessor programming, familiar with Java Bytecode
- Have a deep understanding of network performance and architecture optimization
- Master NIO, use netty framework fluently
- Familiar with Rust and capable of rewriting critical functions in Rust to meet project optimization needs
- Familiar with javascript, html, css and related technologies
- Familiar with big data technology
- **BOLG**:http://blog.163.com/silver9886@126/ https://blog.csdn.net/silver9886
- **Github**: https://github.com/xiaohu-zhang

Publication & Paper

- 2015 Xiaohu Zhang "A randomized method for generating statistical regularity of normal distribution" Progrmming Skills & Maintenance
- 2010 Xiaohu Zhang "watching video using our own writing program" Progrmming Skills & Maintenance
- 2009 Xiaohu Zhang "non recursive solution of Tower of Hanoi" Software Newspaper
- 2008 Xiaohu Zhang "count the number of words in the article using vc++" Software Newspaper

Scholarship & Honor

- **patent**: A randomized method for generating statistical regularity of normal distribution
- 2011.9 Second Prize of Graduate Scholarship in Wuhan University
- 2010.9 Second Prize of Graduate Scholarship in Wuhan University
- Wuhan University outstanding students leaders

Work Experience:

- 2023.02-Now 6-sense technology/kaya technology

Responsibilities: architecture design,coding
Achievement:

- Developed a Texas Hold'em poker game entirely from the ground up,implementing all necessary functionalities such as shuffling, dealing cards, and player bet/raise,card comparison, win/loss determination and so on.The game supported multiplayer gameplay and real-time gaming experience using websocket.There are 20,000 users every day in our poker game plantform,and the game supported 10,000 players in one mtt poker game with only 8cores and 4GB memory configuration.
- Passionate about learning new technologies. During off-hours, I self-learned Rust and rewrote the high-CPU-usage code logic of the poker project in Rust. Compared to Golang, the rewrite achieved a 5x increase in computation speed and a 100x reduction in memory usage.
- As a beginner in Rust, I identified a bug in the Comprehensive Rust learning material (Google's internal teaching resource), submitted a pull request, and successfully had it merged into the main branch.
- Take over and optimize the development of a VPN accelerator project, which include acquiring/updating accelerator nodes through various methods, supporting partitioning of users based on their location and category, displaying user login/logout information and logged phone name, and enabling the purchase of VIP features through multiple payment methods. Optimize all app functions and components of the project and ensure project quality.

Technologies: gRPC, Golang, Redis, rocketMQ,Microservices

➢ 2019.07- 2023.02 tencent

Responsibilities：architecture design,coding

Achievement:

- Design and code the Tencent Posting Advertisement System. Instead of manual advertising placement and optimization work, our project automatically monitors the advertisement metrics (e.g., daily budget) based on the customer's monitoring rules. When the advertisement metrics meet the conditions set by the customer, the corresponding operations (e.g., resetting advertising budgets) are executed. This system greatly reduces the manual workload and increases the number of advertisements that can be managed by a single person.
- Design and code the Tencent Advertisement Diagnosis System. By disclosing detailed data at each stage of the ad's full lifecycle (recall, coarse ranking, fine ranking), such as pass-through rate, pass-through count, models used in coarse and fine ranking, and the consistency between them, as well as various ad metrics (e.g., eCPM, pCTR, pCVR, pCTR bias, ROI, target CPA, risk control factors, pricing factors, and eCPM values compared with ads under the same industry and account), the system facilitate internal clients in ad diagnostics and troubleshooting.
- Design and code the new features of the Tencent Advertisement Diagnosis System, including automatic over-cost diagnostics and off-target exposure diagnostics.

Level: T 3.2

Technologies: golang/c++/raft

➢ 2015.02 – 2019.07 cmcc (hangzhou) Research Institute

Responsibilities: architecture design,coding, management

Achievement:

- Managed three project teams: virtual currency, settlement, and middleware.
- Designed and developed backend services from scratch. Clearly decoupled multiple modules such as settlement, payment, and risk control in the currency circulation process from a business perspective.
- Technically adopted a microservices architecture, led the design of the strace-log system, customized the Spring Boot framework, developed a unique incremental sequence number System, and an RPC call framework.
- Led the architecture and development of the company's delayed message middleware (providing delayed message cancellation functionality), wrote core code, and spearheaded the development of a unique incremental ID middleware and a log-based collection, analysis, and alert system.
- Led the initiative for project interface configuration, allowing interaction with new systems using the same set of machines and code with different configurations, significantly reducing the number of machines and development time.

Technology: redis-cluster spring-boot netty ehcache

➢ 2013.12 – 2015.02 Pingan Fu Intelligent Technology Co. Ltd

Responsibilities: analyze comsomer behavior using hadoop technology

Achievement: Participate in User behavior analysis project that help ios/android developer to improve their product.

➢ 2012.07 – 2013.12 alibaba(china) technology co.Ltd

Responsibilities：coding with java,javascript,html and so on to complete the front page and back-end code

Achievement: Participate in the development of customer relationship management system that allows sellers to increase repeat purchase by 10%

Projects Experience

➢ 2017-08-Now httpcomponent/Spring Data Redis (open-source) contributer

Responsibilities: Top-level open source project contributor, passionate about exploring source code implementations.

Job Description: HttpComponent is an Apache top-level project, Spring Data Redis is a widely used caching framework globally, and Comprehensive-Rust is Google's introductory course to Rust.

- Commit log:
  - httpcomponents：

    https://issues.apache.org/jira/browse/HTTPCORE-486
    https://issues.apache.org/jira/browse/HTTPCORE-488
    https://issues.apache.org/jira/browse/HTTPCORE-489

https://issues.apache.org/jira/browse/HTTPCORE-484
https://issues.apache.org/jira/browse/HTTPCORE-535
https://issues.apache.org/jira/browse/HTTPCLIENT-1928
https://issues.apache.org/jira/browse/HTTPCORE-536

- spring data redis :

  https://jira.spring.io/browse/DATAREDIS-705
  https://jira.spring.io/browse/DATAREDIS-706

- comprehensive-rust:

  https://github.com/google/comprehensive-rust/pull/2372

- Released version 1.0 of two open-source projects:
  - Global Incremental Unique ID Generator: https://github.com/xiaohu-zhang/MiGuId
  - Cancelable Delayed Message Middleware: https://github.com/xiaohu-zhang/Timer

➢ Project Name: Poker game plantForm
Project Date: 2023.02-Now
Description: Utilized Rust to optimize the calculation of poker outs and win rates, dramatically reducing memory and CPU usage. We fully leveraged Golang's capabilities for game development, such as multi goroutines and asynchronous using channels. With an 8-core CPU and 4GB RAM configuration, we supported 10,000 users online simultaneously and a 10,000-player tournament poker game. In contrast, competitors like PokerNow can only support up to 500 players in a tournament game.
Responsibilities: architect and core coding
Achievement: 20,000 users online per day

➢ Project Name: Tencent Posting Advertisement System
Project Date: 2019.07-2023.01
Description: In order to execute a large number of monitoring rules quickly and efficiently, the project is used the raft protocol and the multi coroutines with golang language.
Responsibilities: architect and core coding
Achievement: Over 500,000 monitoring rules were run and completed in 5 minutes. Additionally 50 million yuan is used in our plantform every day.

➢ Project Name: Tencent Advertisement Diagnosis System
Project Date: 2022.4-2023.01
Description: The diagnosis system need to display a large number of indicators.The project is used parallelization/lazy loading/data pre-aggregation/sql optimization/upgrade to http2 and other methods to optimize the loading speed of key indicators on the homepage
Responsibilities: architect and core coding
Achievement: first page loading time decreased from 6s to 1s

➢ Project Name: The People's Bank Of China security project
Project Date: 2018.12-2019.07
Description: Write the basic fundamental financial project used for china.Write the code framework by customized the spring boot framework,design the microservice architecture,such as:service found,rpc,distribute message trace,service circuit breaker,service upgrade/downgrade,Grayscale release/AB testing,distribute transaction,sharding database and so on.
Responsibilities:framework team team leader. Framework core coder, architect
Achievement: support 300,000 tps with project

➢ Project Name: distributed delay messaging data platform
Project Date: 2018.10-2018.11
Achievement:The client can customize the delay time for delayed messages and cancel message sending within the delay period. It supports distributed horizontal scaling, master-slave configuration, reliable messaging, and failover. Existing message middleware like Kafka does not support this feature, and open-source projects like RocketMQ only support fixed

delay times (e.g., 10s, 30s, 1min) without allowing clients to customize the delay time. In practice, this feature is available on Alibaba Cloud/Tencent Cloud but requires payment, so I developed this middleware myself.
Responsibilities: core coder, architect
Achievement: Producer can send arbitrary delay time message with 10000+ tps

- Project Name: Virtual money system

Project Date: 2015.02-2019.07
Description: Virtual money system has two different category: value and non-value.It has four fundamental Functions-deposit,donate,consumption,withdraw consumer money and withdraw non-value money which is out of date.
Responsibilities:Designer, Coder Management
Achievement: System can be invoked at 50000 TPS within 30ms latency. Using the web framework writtern by myself customized with the spring boot framework.

- Project Name: User behavior analysis project

Project Date: 2014.02-2015.02
Description:Our system get logs from app which is used by comster,and analysis the log in order to get some informations(eg:the number of new comstomers every day,survival customers in 7 days and so on) using hadoop/hive technology.
Responsibilities： coding with java using hadoop,hive technology
Achievement： app developer can see more information by our analysis project

- Project Name: Dispatching system project

Project Date: 2014.02-2014.07
Description:The dispatching system is able to Schedule lots of different task by parent-child relationship.The task owner can decide the task run at the time he allowed,and only the parent task run successful,then the child task will start to shedule.If the task run failed ,the system will log the error message into the database.
Responsibilities:Team leader ,Designer, Coder
Achievement: help task owners to schedule their task easily and manage their task efficiently .