

ZHONG YU

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<https://zhong-yu.org>

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- Extensive knowledge in Java ecosystem, database, concurrency, distributed system, internet technologies.
- Strong analytic and problem solving skills, detail-oriented, practical-minded. Curious and creative.
- Honor-bound, take pride and ownership in my work. Aim to impress, always deliver. Enjoy teamwork.

Experience

Freelance *Application Developer* Houston, TX 2010 - 2021

- Developed and maintained web and desktop applications for clients.
- Collected, processed, analyzed, and presented business data for clients.

Alibaba Group *Senior Software Engineer* Hangzhou, China 2017 - 2018

StreamCompute Platform for AliCloud

- Worked on Apache Flink's SQL Query Processing module to add features and fix issues:
- Analyzed and enforced SQL standard-compliance. Implemented full support for Decimal type.
- Introduced new strategies in query optimizer that greatly improved TPC benchmarks.
- Established a theoretical framework to transform any join-group-aggregate queries for optimization.

Atypion Systems *Senior Software Engineer* Santa Clara, CA 2001 - 2008

- Created a backend workflow system, with a modeling language, compiler, engine, and admin interface.
- Created an authoring system for clients to edit, version, audit, stage, and publish web pages.
- Created infrastructure frameworks, including ORM, caching, distributed consensus.
- Maintained and improved website performance, scalability, and availability for growing demands.
- Integrated with client systems through numerous proprietary and standard protocols.
- Implemented various business features, in particular identity management, access control, e-commerce.
- Worked directly with clients to resolve issues, gather requirements, and write specifications.

Fermi National Accelerator Lab *Researcher* Batavia, IL 1998 - 2000

- Implemented frameworks and algorithms in C++ for real-time detector event streaming and analysis.
- Created Labview applications for mapping magnetic field in the D0 detector solenoid.
- Wrote Delphi applications to motorize lab machines, to acquire and analyze experimental data.

Open Source

- [rekex.org](https://github.com/zhongyu/rekex) - PEG parser generator for Java 17 - grammar as algebraic datatypes.
- [bayou.io](https://github.com/zhongyu/bayou) - Async HTTP server/client - high performance in functional style, full-featured.
- [subpage](https://github.com/zhongyu/subpage) - ReactJS router - simple API, flexible navigation models.

Education

- **M.S. in Computer Science** 2001 Loyola University Chicago Chicago, IL
- **M.S. in Physics** 2000 Northwestern University Evanston, IL
- **B.S. in Physics** 1997 Peking University Beijing, China