

# Yao Meng

Senior Software Development Engineer - Distributed Storage System

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## Summary

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Senior Software Engineer specializing in distributed storage systems and high-performance caching systems.

Founder and maintainer of **Foyer** (1.6k ★), hybrid cache in Rust, used in **Apache OpenDAL**, **RisingWave**, **ChromaDB**, **SlateDB**, **ZeroFS**, etc.

Active open-source contributor, contributed to **Apache OpenDAL**, **TiKV**, **Chroma**, **RisingWave**, **SlateDB**, etc.

## Education

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### Beihang University

Beijing, China

M.S. in Computer Science and Engineering

Sep. 2020 - Jan. 2023

- GPA: 3.80/4.0

### Beihang University

Beijing, China

B.S. in Computer Science and Engineering

Sep. 2016 - Jun. 2020

- GPA: 3.72/4.0, Rank 6/157 (Top 4%); Outstanding Graduate (2 in 157).

## Project

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### Foyer - Hybrid Cache Library in Rust

<https://github.com/foyer-rs/foyer>

May. 2023 - now

Founder and Maintainer

- Designed and built a production-ready hybrid (memory + disk) cache library in Rust, targeting cloud-native data infrastructure.
- Achieved high performance via a plug-and-play modular architecture, replaceable algorithms and engines, and optimized concurrency.
- Built with enterprise features such as rich observability, extensive configuration options, and broad ecosystem compatibility.
- 1.6k ★, used by 100+ projects on Github, including **Apache OpenDAL**, **RisingWave**, **ChromaDB**, **SlateDB**, **ZeroFS**, **Percas**, etc.
- A deep dive into Foyer: <https://blog.mrcroxx.com/posts/foyer-a-hybrid-cache-in-rust-past-present-and-future/>

## Experience

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### RisingWave Labs

Beijing, China

Database Kernel Development Engineer - Rust

Nov. 2021 - now

- Early engineer at RisingWave, contributing from the ground up to the design and evolution of the core storage and streaming system.
- Owned the design and implementation of the hybrid cache subsystem in RisingWave's storage engine.
- Led optimization of S3-based LSM-tree storage engine read path, achieve 3x more throughput for join-heavy workload, reducing S3 read operations by 90% and overall storage cost by 45%, and optimized system stability.

### Chroma

Remote

Part-time Consultation

Oct. 2024 - Jan. 2025, April. 2025 - Now

- Provided design guidance on the hybrid cache system, integrated Foyer into Chroma, involved in debugging and technical support.

### PingCAP

Beijing, China

Distributed Storage System Development Intern - Rust

Apr. 2021 - Nov. 2021

- Optimized the write-ahead log (WAL) recovery path in TiDB/TiKV, achieving up to 10x faster recovery time.
- Improved algorithms in the Raft-based key-value storage engine, reducing leader eviction latency by 2x under slow-follower scenarios.
- Optimized the Raft log GC of the RocksDB-based WAL engine, reducing Raft log GC bandwidth usage by 5%-30% across different workloads.
- Contributed to the maintenance of PingCAP's RocksDB fork and the Rust bindings used in TiKV.

### Bytedance

Beijing, China

Backend Development Intern - Go

Oct. 2019 - Jan. 2020

- Contributed to backend services and data infrastructure for a large-scale advertising recommendation system.

## Presentation

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### Apache Community Over Code Asia 2025

Beijing

Enhancing Performance and Reducing Cost for Object Store Access with Apache OpenDAL and Foyer

Jul. 27, 2025

### Rust China Conf 2024

Shanghai

Foyer: Easily Enhance Your Cloud Data Engine with foyer Hybrid Cache

Sep. 07, 2024