

YANGCHEN YE

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🎓 EDUCATION

University of Illinois Urbana-Champaign, Champaign, IL

Aug. 2022 – Dec. 2023

Master in Computer Science

College of William & Mary, Williamsburg, VA

Aug. 2018 – May. 2022

B.S. in Computer Science (CS)

GPA: 3.97

4.0-Grade Courses: Database System, Operating System, Computer Network, Computer Organization, etc.

Phi Beta Kappa Honor Society

👥 INTERNSHIP EXPERIENCE

Didi Chuxing Inc., Beijing, China

Feb. 2021 – Jul. 2021

Java + JavaScript, Full-Stack Developer Intern

Developed and maintained Didi Chuxing's safety operation platform for its global taxi business

- Refactored the project's **MySQL** database schema, introducing **relation tables** to better express the data model, which simplified the application logic and increased maintainability.
- Developed a series of interfaces in the **SpringBoot** server that queries the **ElasticSearch** service.
- Developed and optimized web application built with **React.Js** to have better performance by re-structuring chains of **asynchronous API calls**.

📁 ACADEMIC PROJECTS

SimpleDB

Sep. 2021 – Nov. 2021

Java, Individual Developer

Built a simple but complete database backend using Java

- Implemented **Heapfile** and **BTreeFile** with support for fixed-size data types; created a BufferPool with **LRU** strategy.
- Built query executor with **Iterator Pattern**, supporting SQL operations like Join, Filter, and Aggregate.
- Supported **Repeated-Read** level transaction by implementing **two-phase** locking for pages.

Raft & Distributed KV Application

Feb. 2021 – May. 2021

Go, Individual Developer

Developed a consensus engine based on Raft and created a distributed KV storage service

- Implemented **Raft** algorithm based on Raft Paper, which supports a persistent replicated state machine.
- Built a distributed Key-value storage on top of Raft with fault-tolerance.
- Improved the throughput of the KV application by **sharding** the database to multiple Raft groups.

🔗 OPEN SOURCE PROJECTS

PingCap's Talent-Plan – Practical Networked Application in Rust 🔗

Apr. 2022 - Present

Rust, Individual Developer

Implemented a KV store library based on **log-structured I/O** and **Asynchronous Server/Client** on top of it in Rust

- Followed through PingCap's Talen-Plan Course on Rust and provided bug report issues for the upstream.

Bilibili Helpers

Nov. 2020 - Present

Java + JavaScript, Open Source Developer

Built and Deployed several helper applications for using Bilibili, a video and live streaming platform

- Developed a 'Bullet Screen Comment Bot' server that collects bullet screen comment from a live-room and supports auto-reply to various comments. 🔗
- Use Github Action to monitor the info of a given user on Bilibili and send telegram notifications when interesting events happens. 🔗

⚙️ SKILLS

- Programming Languages: Java == JavaScript == Rust > Go > Python > C
- Technical Skills: React.Js, Agile Development, Git, Github, Code Review
- Industry Knowledge: Web, Database, Distributed Systems, Algorithms & Data Structures