

# ZIYI YAN

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## 🎯 RESEARCH INTERESTS

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I am interested in improving systems efficiency and also the efficiency of building systems in the areas of Transaction Processing, Query Processing, Concurrency Control, and Disaggregated Database Systems.

## 🎓 EDUCATION

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**Simon Fraser University**, Burnaby, Canada Sept. 2021 – Present

*Ph.D.* Computing Science

- Advised by Professor Tianzheng Wang

**Huazhong University of Science and Technology**, Wuhan, Hubei, China Sept. 2014 – June 2018

*B.Eng.* Electronics and Information Engineering

## 🏆 AWARDS

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- Outstanding Contribution Award from Software Department of SZ DJI Technology Co., Ltd. in 2019
- Outstanding Graduate from Huazhong University of Science and Technology in 2018
- China National Encouragement Scholarship from Huazhong University of S. & T. in 2015

## 📖 PUBLICATIONS

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*Names of myself are highlighted with underline.*

**Tabular: Efficiently Building Efficient Indexes** (preprint) Mar. 2025

Ziyi Yan, Mohamed Farouk Drira, Tianxun Hu, Tianzheng Wang

VLDB 2025

**OptiQL: Robust Optimistic Locking for Memory-Optimized Indexes** Sept. 2023

Ge Shi, Ziyi Yan, Tianzheng Wang

Proceedings of the ACM on Management of Data, Volume 1, Issue 3 (SIGMOD 2024)

## 👥 ACADEMIC EXPERIENCE

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**Simon Fraser University**, Burnaby, Canada

*Graduate Student Research Assistant*, Data-Intensive Systems Lab Sept. 2021 – Present

- Implemented coroutine-oriented pull-based and push-based query processor over Corobase
- Designed and conducted experiments to evaluate locking primitives in OptiQL
- Implemented and optimized concurrency control protocols for a memory-resident storage engine in Tabular
- Working on extending a storage engine to support disaggregated memory

*Teaching Assistant*, CMPT 454: Database Systems II (Bachelor) Spring 2025

*Teaching Assistant*, CMPT 454: Database Systems II (Bachelor) Summer 2024

*Teaching Assistant*, CMPT 740: Database Systems (Master) Fall 2022

## 💬 TALKS & POSTERS

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- Talk on *Tabular: Efficiently Building Efficient Indexes* at CMPT 984: Special Topics in Database Systems, Simon Fraser University, Spring 2025
- Poster on *Tabular: Efficiently Building Efficient Indexes* at Northwest Database Society (NWDS) Annual Meeting 2025
- Poster on *OptiQL: Robust Optimistic Locking for Memory-Optimized Indexes* at Northwest Database Society (NWDS) Annual Meeting 2024

## 👍 SERVICE

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- Seminar organization for SFU Computer Systems Group (Summer 2024)
- Student volunteer for VLDB 2023

## 🏢 INDUSTRIAL EXPERIENCE

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### **Singularity Data**, Remote

*Infrastructure Software Engineer Intern*

Mar. 2021 – June 2021

- Implemented Parquet ingestion in C++

### **The Linux Foundation**, Remote

*Mentee of TiKV project*, CNCF LFX Mentorship Program

Mar. 2021 – May 2021

- Implemented Jepsen consensus tests for distributed key-value store, TiKV

### **SZ DJI Technology Co., Ltd.**, Shenzhen, China

*Back-end Software Engineer*, R&D Department

Aug. 2018 – Sept. 2020

- Implemented two projects' back-ends from the ground up in Go with clear architecture for code organization
- Delivered presentations for the teams themed in tech, such as "Go in best practices"
- Architected the project in hexagonal architecture for decomposition between databases and business logic
- Refactored a monolith service to distributed microservices deployed on Kubernetes

### **Xiao'an Technology Co., Ltd.**, Wuhan, Hubei, China

*Software Engineering Intern*, Software R&D Department

May 2017 – Mar. 2018

Xiao'an Technology Co., Ltd. is a startup incubated by Dian Group in Huazhong University of S. & T.

## ✍ OTHER EXPERIENCE

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### **Dian Group**, Qiming College, Huazhong University of Science and Technology

*Student Leader*

June 2017 – Mar. 2018

- Supervised by Professor Liu Yu, Professor Zhong Guohui, Professor Liu Bo

*Student Member*

Sept. 2015 – June 2018