Yuyuan Kang

Computer Sciences Department, University of Wisconsin-Madison, Madison, US
(608) 628-7498 yuyuan@cs.wisc.edu

EDUCATION

University of Wisconsin-Madison Madison, US
Ph.D. in Computer Science *Aug. 2022 – Apr. 2027 (expected)*
Tsinghua University Beijing, China
Master of Engineering, Software Engineering *Sep. 2019 – Jun. 2022*
Northeastern University Shenyang, China
Bachelor of Engineering, Software Engineering *Sep. 2015 – Jun. 2019*

PUBLICATIONS

- *Understanding and Profiling NVMe-over-TCP Using ntprof*
  Yuyuan Kang, Ming Liu.
  USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2025
- *Time Series Representation for Visualization in Apache IoTDB*
  Lei Rui, Xiangdong Huang, Shaoxu Song, **Yuyuan Kang**, Chen Wang, Jianmin Wang.
  Proceedings of the ACM on Management of Data (SIGMOD), 2024
- *Separation or Not: On Handing Out-of-Order Time-Series Data in Leveled LSM-Tree*
  Yuyuan Kang, Xiangdong Huang, Shaoxu Song, Jialin Qiao, Jianmin Wang, *et al.*
  International Conference on Data Engineering (ICDE), 2022
- *Heterogeneous Replicas for Multi-dimensional Data Management*
  Jialin Qiao, **Yuyuan Kang**, Xiangdong Huang, Jianmin Wang, and S. Yu Philip, *et al.*
  International Conference on Database Systems for Advanced Applications (DASFAA), 2020

RESEARCH EXPERIENCE

Research Assistant (University of Wisconsin-Madison) Sep. 2022 – Present

- Studying high-performance distributed systems empowered by GPU Direct technologies.
- Understanding and profiling I/O submission and completion path in disaggregated storage systems.
- Designing new deterministic database systems for more functionality and high performance.

Research Assistant (Tsinghua University) Sep. 2019 – Jun. 2022

- Contributed to Apache IoTDB. In *stand-alone* version: optimized query plan execution; defined syntax and parsing logic of IoTDB SQL based on ANTLR V4. In *distributed* version: managed logs in memory; implemented the execution of DDL based on the Raft protocol; implemented time-series auto-registration.
- Implemented an IoTDB-Oriented Writing System. Requirement engineering, communicated with Tianyuan Technology Co., Ltd., sorted out time series storage requirements and wrote various types of requirement documents. Database schema design, system deployment, data migration and performance analysis. System support and maintenance, deployed 10 IoTDB instances; managed 170,000 vehicles and 33 million time series; supported a full spectrum of services to the Tianyuan Technology Co., Ltd.

TEACHING

- CS300 – *Programming II*, UW-Madison (Fall 2025, Spring 2024)
- CS407 – *Foundations of Mobile Systems and Applications*, UW-Madison (Fall 2024, Fall 2023)
- Principals of Database, Tsinghua University (Spring 2021)

SKILLS

- Programming: Java, Python, C/C++, SQL, MATLAB, Kotlin
- Languages: Chinese (native), English