

TENGJUN JIN

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EDUCATION

University of Illinois at Urbana-Champaign

PhD in Computer Science | GPA: 4.0 / 4.0

Aug. 2024 - Current

MS in Electrical and Computer Engineering | GPA: 4.0 / 4.0

Aug. 2022 - May. 2024

B.S. in Computer Engineering | GPA: 3.80 / 4.0

Aug. 2018 - Aug. 2022

Zhejiang University

B.Eng. in Computer Engineering | GPA: 3.97 / 4.0

Aug. 2018 - Sep. 2022

SELECTED RESEARCH

- **Tengjun Jin**, Yuxuan Zhu, Daniel Kang. "ELT-Bench: An End-to-End Benchmark for Evaluating AI Agents in ELT Pipeline". (VLDB 2026, [arXiv](#))
- **Tengjun Jin**, Yoojin Choi, Yuxuan Zhu, Daniel Kang. Pervasive Annotation Errors Break Text-to-SQL Benchmarks and Leaderboards. (In submission)
- **Tengjun Jin**, Yoojin Choi, Yuxuan Zhu, Daniel Kang. Text-to-SQL Benchmarks are Broken: An In-Depth Analysis of Annotation Errors. (CIDR 2026)
- Yuxuan Zhu, **Tengjun Jin**, et al. "Establishing Best Practices for Building Rigorous Agentic Benchmarks". (NeurIPS 2025, [arXiv](#))
- Yuxuan Zhu, **Tengjun Jin**, Stefanos Baziotis, Chengsong Zhang, Charith Mendis, Daniel Kang. "PilotDB: Database-Agnostic Online Approximate Query Processing with A Priori Error Guarantees". (SIGMOD 2025)
- **Tengjun Jin**, Akash Mittal, Chenghao Mo, Jiahao Fang, Chengsong Zhang, Timothy Dai, Daniel Kang. "AIDB: a Sparsely Materialized Database for Queries using Machine Learning".
- Yuxuan Zhu, **Tengjun Jin**, Kaimeng Zhu, Siheng Pan, Chenghao Mo, Daniel Kang. "Balance Uncertainty with Certainty: Accelerating Approximate Aggregation Queries with Joins over Unstructured Data".

SELECTED PROJECT

Pervasive Annotation Errors Break Text-to-SQL Benchmarks and Leaderboards | [Github](#)

Advisor: Daniel Kang, UIUC

- Developed SAR-Agent, the first AI agent for detecting text-to-SQL annotation errors.
- Detected error rates of 52.8% on BIRD mini-Dev and 62.8% on Spider 2.0-Snow.
- Re-evaluated all 16 open-source text-to-SQL agents on the BIRD leaderboard, revealing relative performance shifts of -7% to +31% and rank changes of -9 to +9.

ELT-Bench: An End-to-End Benchmark for Evaluating AI Agents in ELT Pipeline | [Github](#) | [arXiv](#)

Advisor: Daniel Kang, UIUC

- Built the first end-to-end benchmark in the data engineering domain to evaluate AI agent performance in automating ELT pipelines.
- Simulated real-world scenarios by integrating multiple data sources and tools.
- Required the AI agent to interact with databases and data tools, write code and SQL queries, and orchestrate each stage of the pipeline from inception to execution.
- Evaluated four agent frameworks with five popular LLMs on ELT-Bench.

AQP system: a middleware that accelerates aggregation queries | [arXiv](#)

Advisor: Daniel Kang, Charith Mendis, UIUC

- Proposed an efficient and error-bounded AQP method without modifying the underlying DBMS or extra maintenance effort of DBAs.
- Provided theoretical analysis and results for (i) the block sampling to improve efficiency and (ii) a two-phase sampling scheme to provide a priori error guarantees.
- Evaluated on four workloads for big data analytics, showing up to two orders of magnitude speedups.

WORK EXPERIENCE

Tiktok - SDE Intern - Text-to-SQL agent

June 2025 – Sep. 2025

Alibaba Cloud - Machine Learning Intern - Risk Control

May. 2023 – Aug. 2023