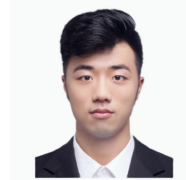


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Education

Technical University of Darmstadt

Ph.D. in Computer Science

Topic: Towards Disaggregated GPU-Accelerated Data Processing

Advisor: Prof. Carsten Binnig

Darmstadt, Germany

Oct. 2023 – Present

Technical University of Munich

M.Sc. in Data Engineering and Analytics

Thesis: Optimizing Low Level Plan Operators

Advisor: Prof. Viktor Leis

Munich, Germany

Apr. 2020 – Sep. 2023

Technical University of Munich

B.Sc. in Information Systems

Thesis: Storing Large Variable-Size Data Blocks on Fixed-Size Pages

Advisor: Prof. Alfons Kemper and Prof. Thomas Neumann

Daily supervisor: Dr. Alexander van Renen

Munich, Germany

Sep. 2016 – Feb. 2020

Work Experience

MariaDB Corporation

Google Summer of Code Contributor

Optimized UNION processing through performance improvements and bug fixes, and evaluated vectorization techniques in MariaDB Columnstore Engine

Remote

May 2022 – Sep. 2022

Zilliz

Research Intern

Winner of NeurIPS'21 Competition Track (Billion-Scale Approximate Nearest Neighbor Search) and co-author of a VLDB 2022 Industrial Track paper.

Hangzhou, China

May 2021 – Dec. 2021

Technical University of Munich

Teaching Assistant

TA of two lectures: Functional Programming and Verification, Foundations of Databases.

Munich, Germany

Oct. 2018 – May 2020

Awards & Honors

Best Exercise Award in Advanced Data Management Systems Lecture, TU Darmstadt 2025

Outstanding Student Award of VLDB Summer School 2022

NeurIPS'21 Competition Track Winner: Billion-Scale ANNS Challenge 2021

Publications

1. **Jigao Luo**, Xiangpeng Hao, Andrew Lamb, Carsten Binnig. "Parquet Tools: A Better Parquet Is Parquet Itself". In: **VLDB'26 Demonstrations Track (under submission)**, 2026.

2. **Jigao Luo**, Qi Chen, Carsten Binnig. “Do GPUs Really Need New Tabular File Formats?”. In: **DaMoN’26**, 2026.
3. **Jigao Luo**, Nils Boeschen, Muhammad El-Hindi, Carsten Binnig. “PystachIO: Efficient Distributed GPU Query Processing with PyTorch over Fast Networks & Fast Storage”. In: **VLDB’26**, 2026.
4. **Jigao Luo**, Nils Boeschen, Tobias Ziegler, Carsten Binnig. “An Evaluation of NVMe-over-Fabrics for Disaggregated Databases over Fast Networks”. In: Datenbanksysteme für Business, Technologie und Web (**BTW’25**), 2025.
5. Lawrence Benson, Carsten Binnig, Jan-Micha Bodensohn, Federico Lorenzi, **Jigao Luo**, Danica Porobic, Tilmann Rabl, Anupam Sanghi, Russell Sears, Pinar Tözün, Tobias Ziegler. “Surprise Benchmarking: The Why, What, and How”. In: Proceedings of the Tenth International Workshop on Testing Database Systems (**DBTest’24**), 2024.
6. Rentong Guo, Xiaofan Luan, Long Xiang, Xiao Yan, Xiaomeng Yi, **Jigao Luo**, Qianya Cheng, Weizhi Xu, Jiarui Luo, Frank Liu, Zhenshan Cao, Yanliang Qiao, Ting Wang, Bo Tang, Charles Xie. “Manu: A Cloud Native Vector Database Management System”. In: Proceedings of the VLDB Endowment (**VLDB’22**), 2022.