

Ziming DAI

Phone: (+86) 17395267535 | Email: phoenixdai@tju.edu.cn

Education Background

Tianjin University, China (985, Double First Class) 09/2023-present

Master of Engineering in Computer Technology, **GPA: 89.01/100**

Core Modules: Natural Language Processing, Software Architecture, Advanced Computer Vision, Big Data Theory and Algorithms, Data Analysis & Data Mining, Advanced Computer Architecture, Advanced Artificial Intelligence.

Tianjin University, China (985, Double First Class) 09/2019-07/2023

Bachelor of Engineering in Artificial Intelligence, **GPA: 90.26/100**

Core Modules: Machine Learning, Parallel Computing, Knowledge Engineering, Computer Vision & Pattern Recognition.
Thesis: Blockchain Group Federated Learning for Industrial Internet (**Outstanding Undergraduate Graduation Thesis**)

Publications

- [1] **Z. Dai**, Y. Zhao, C. Qiu, X. Wang, H. Yao, D. Niyato. Multi-Granularity Federated Learning By Graph-Partitioning. *IEEE Transactions on Cloud Computing*, 2024 (Rank 49/258 = 18.9% in *COMPUTER SCIENCE, INFORMATION SYSTEMS*; IF: 5.0).
- [2] **Z. Dai**, C. Qiu, F. Gao, Y. Zhao, X. Wang. ACME: Adaptive Customization Of Large Models Via Distributed Systems. *ICDCS 2025 (CCF-B)*.
- [3] **Z. Dai**, Y. Zhao, C. Qiu, X. Wang, F. R. Yu. MG²FL: Multi-Granularity Grouping-Based Federated Learning In Green Edge Computing Systems. *GLOBECOM 2023 (CCF-C)*.
- [4] **Z. Dai**, T. Zhang, F. Gao, X. Cai, X. Wang, C. Zhang, W. Wang, C. Zang. Stratos: An End-to-End Distillation Pipeline For Customized LLMs Under Distributed Cloud Environments. *AAAI 2026 (CCF-A)*.
- [5] C. Qiu, Z. Chen, X. Ren, **Z. Dai**, C. Zhang, X. Wang. Almers-6G: AI-Driven Region-Temporal Resource Provisioning For 6G Immersive Services. *IEEE Wireless Communications*, 2023 (Rank 4/250 = 1.6% in *COMPUTER SCIENCE, INFORMATION SYSTEMS*; IF: 10.9).
- [6] J. Cui, Z. Li, Y. Li, Z. Guo, **Z. Dai**, J. Zhang. Single-Pass Poisson-Disk Sampling Via Circle Packing. *Computers & Graphics, major revision* (Rank 53/129 = 41.0% in *COMPUTER SCIENCE, SOFTWARE ENGINEERING*; IF: 2.8).
- [7] **Z. Dai**, L. Gao, C. Qiu, G. Peng, X. Ren, X. Wang, H. Zhu, N. Xiang, S. Han. An Edge Computing System And Method Based On Multi-Granularity Group Federated Learning. *China Patent CN117687782A, issued 07/12/2023*.
- [8] C. Qiu, **Z. Dai**, F. Gao, Y. Zhao, H. Zhang, X. Wang. An Adaptive Method For Large Models In Heterogeneous Cloud-Edge-End Environments. *China Patent CN119537966A, issued 25/10/2024*.
- [9] X. Wang, Z. Liu, **Z. Dai**, C. Qiu, Z. Wang, G. Bian. Blockchain-Based Multi-Level Risk Control System And Management Method. *China Patent CN114626934A, issued 08/02/2022*.

Research Experiences

Project Leader, Tianjin University, Tianjin, China 01/2023-12/2024

- Topic: Research on key technologies and applications of intelligent edge perception for transmission line faults.
- Tasks: Proposed and deployed an innovative federated learning aggregation method, integrating cross-granularity distillation and credit-based mechanisms, to identify power transmission line fault images using YoloV5.
- Output: Part of the work published by GLOBECOM 2023 [3]; Extended version published by Transactions on Cloud Computing 2024 [1]; Resulted in one China patent [7].

Project Leader, Tianjin University, Tianjin, China 10/2022-09/2023

- Topic: Blue noise sampling algorithm based on disk packing and its application in digital stippling.
- Tasks: Conducted research on blue noise sampling techniques and contributed to the development and implementation of a method for applying blue noise sampling in pointillism rendering.
- Output: Part of the work submitted to Computers & Graphics (major revision) [6].

Participant, Tianjin University, Tianjin, China 10/2021-10/2022

- Topic: Blockchain-based multi-level credit card risk control system.
- Tasks: Built a blockchain-based federated learning framework; Wrote smart contracts and developed the backend

using Python; Implemented a complete credit card risk control system deployed on the blockchain.

- Output: Received the “Silver Award” at the China College Students’ “Internet+” Innovation and Entrepreneurship Competition; Part of the work published by IEEE Wireless Communications [5]; Resulted in one China patent [9].

Intern, Qfin Holdings, Inc., Beijing, China 09/2025-present

- Topic: LLM-assisted algorithm enhancement for gradient boosting models.
- Tasks: Developed an LLM-driven plug-in algorithm to enhance the classification performance of XGBoost; Leveraged the code generation and data analysis capabilities of LLMs for rapid program development and iteration.

Intern, Pai Ou Cloud Computing (Shanghai) Co., Ltd., Shanghai, China 12/2024-03/2025

- Topic: Distributed deployment and resource optimization for large language models.
- Tasks: Investigated the impact of edge device resource limitations on LLM deployment; Proposed an end-to-end distributed framework for cloud environments to optimize LLM resource scheduling and performance.
- Output: Part of the work published by AAAI-IAAI 2026 [4].

Intern, Beijing Wenge Technology Co., Ltd., Beijing, China 05/2022-07/2022

- Topic: Named entity recognition (NER) in low-resource languages.
- Tasks: Conducted research on and implemented advanced NER techniques; Adapted the models for low-resource languages via transfer learning.
- Output: Successfully developed NER models optimized for deployment in low-resource language environments.

iOS Development Leader, Tianjin University, Tianjin, China 09/2019-07/2022

- Topic: iOS front-end development, UI design, and team leadership for high-usage university services.
- Tasks: Designed and implemented the UI and front-end logic for core functionalities; Developed the iOS client UI for a student BBS platform; Managed and executed regular application maintenance and updates.
- Output: Deployed a comprehensive iOS campus service application used by over 38,000 students.

Honors and Awards

First Prize for Academic Scholarship of Tianjin University	2025
Excellent Student Cadre of Tianjin University	2025
Merit Student of Tianjin University	2024
Second Prize for Academic Scholarship of Tianjin University	2024
Excellent Graduates of Tianjin University	2023
Gold Award of China College Students’ “Internet” Innovation and Entrepreneurship Competition - Tianjin	2023
Silver Award of China College Students’ “Internet” Innovation and Entrepreneurship Competition - Tianjin	2022
Top Ten of Shenzhen International Science and Technology Finance Competition	2022
Second Prize of “Spark Cup” Blockchain Application Competition - Northern Region	2022
Meritorious Winner of Mathematical Contest In Modeling	2022
Excellence Award of China Blockchain Development Competition - Northern Region	2021
Fourth Place of Shenzhen International Science and Technology Finance Competition	2021
Merit Student of Tianjin University	2021
Excellent Student Cadre of Tianjin University	2020
University-Level Outstanding Practice Team of Tianjin University	2020
Merit Student of Tianjin University	2019

Languages and Skills

Mandarin (native), English (fluent, TOEFL: 103), Python, Swift, C#, Golang