

Xiao Fan

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EDUCATION

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| • Tongji University · College of Computer Science and Technology | Shanghai, China |
| <i>B.Eng. in Data Science and Big Data Technology; GPA: 4.84/5; Rank: 1/37</i> | <i>2022.09–2026.06</i> |
| • Tsinghua University · Tsinghua Shenzhen International Graduate School | Shenzhen, China |
| <i>D.Eng. in Electronic Information, advised by Prof. Zhi Wang</i> | <i>2026.09–2031.06</i> |

RESEARCH INTERESTS

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| • Test-Time Adaptation | <i>2025.01–Present</i> |
| <i>Test-time model adaptation under data distribution shifts (domain shift) without access to source data.</i> | |
| • Self-Evolving Embodied Agent | <i>2025.05–Present</i> |
| <i>Embodied agents that learn from environmental interaction to continually self-improve.</i> | |

EXPERIENCE

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| • HeyWhale | Remote |
| <i>Data Analyst Intern (Part-time)</i> | <i>2024.07–2024.08</i> |
| ◦ Community Support in Data Science: Provided timely answers and guidance to learners and developers on data analysis, machine learning, statistics, and visualization questions in online communities. | |
| ◦ Tutorial and Educational Content Creation: Designed and authored clear, structured tutorials and guides, translating complex data science concepts into practical, easy-to-follow instructions. | |
| ◦ Knowledge Sharing and Engagement: Enhanced community learning by sharing example code, best practices, and learning paths to improve technical skills and foster engagement. | |

PUBLICATIONS (* EQUAL CONTRIBUTION, † CORRESPONDING AUTHOR)

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|---|-------------|
| • Beyond the Exploration-Exploitation Trade-off: A Hidden State Approach for LLM Reasoning in RLV | <i>2025</i> |
| Fanding Huang*, Guanbo Huang*, Xiao Fan , Yi He, Xiao Liang, Xiao Chen, Qinting Jiang, Faisal Nadeem Khan, Jingyan Jiang†, Zhi Wang† | |
| <i>Submitted to ACL ARR 2026.</i> | |
| Keywords: LLM Reasoning, Reinforcement Learning, Representation Interpretability | |
| [PDF] [BibTeX] [Code] [Project Page] | |
| • MoETTA: Test-Time Adaptation Under Mixed Distribution Shifts with MoE-LayerNorm | <i>2026</i> |
| Xiao Fan, Jingyan Jiang†, Zhaoru Chen, Fanding Huang, Xiao Chen, Qinting Jiang, Bowen Zhang, Xing Tang, Zhi Wang | |
| <i>Proceedings of the 40th Annual AAAI Conference on Artificial Intelligence (AAAI, CCF-A, 17.6% overall acceptance rate)</i> | |
| Keywords: Test-Time Adaptation, Mixture of Experts | |
| [PDF] [BibTeX] [Code] [Poster] | |

SELECTED HONORS AND AWARDS

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| • Global Campus AI Algorithm Elite Competition | National 1st Prize |
| <i>Challenge: “BIRADS Classification and Feature Recognition in Ultrasound Breast Images”</i> | <i>2024.11</i> |
| • 15th Lanqiao Cup | National 3rd Prize |
| <i>Python Programming</i> | <i>2025.08</i> |
| • Tongji University Excellent Student Scholarship | 1st Prize |
| <i>Guo Xie Birong Scholarship, 2 out of 756 students</i> | <i>2023.12</i> |

SKILLS SUMMARY(* EXPERT, † PROFICIENT, ‡ BASIC, § HANDS-ON EXPERIENCE)

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| • Programming: Python*, C++†, C†, Bash‡, SQL‡, JavaScript§, TypeScript§ | |
| • Frameworks: PyTorch†, Scikit†, Streamlit†, Next.js‡, Qt Quick‡, TailwindCSS‡ | |
| • Tools: Pandas†, LATEX†, Vim†, Tmux†, Git†, Matplotlib†, Docker‡ | |
| • Languages: English† (CET-4: 658, Top 1%; CET-6: 608, ~Top 5%), Japanese§ (Self-Study on Duolingo) | |
| • Sports: Men’s Pistol* (10m Air, 25m Rapid Fire, 50m Free; Achieved 1st Place (Team) and 4th Place (Individual) at Shanghai City Championship), Badminton†, Golf‡, Indoor Climbing‡ | |

VOLUNTEER EXPERIENCE

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| • Math Takeaway (Campus Public Welfare Organization) | Tongji University |
| <i>Lecturer for Linear Algebra</i> | <i>2025.09–2025.12</i> |
| ◦ Delivered a Linear Algebra final exam review lecture. | |
| ◦ Co-developed two chapter-level knowledge summaries and revision sessions. | |
| ◦ Produced and published recorded revision lectures on BiliBili. | |