

Yuecheng Li

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Education

- 2022 – Present 📖 **M.Eng. Computer Technology, Sun Yat-sen University (SYSU, Project 985), China.**
Honor: First Prize Scholarship, One-Star Volunteer, Postgraduate Exempt from Exam.
- 2018 – 2022 📖 **B.Sc. Computational Mathematics, Sun Yat-sen University, China.**
Honor: Second Prize Scholarship, Outstanding Branch Secretary of Youth League.
Thesis: The Research on Community Detection Algorithm based on Contrastive Learning.

Work Experience

- 2024.06 – 2024.09 📖 **Tongyi Algorithm & Product Security team, Alibaba Cloud.**
- Summary: Safety benchmark for Tongyi Qianwen, **QAs on Safety evaluations, Safe corpus generation**, and Safety alignment of LLM
 - Responsibilities:
 - Evaluated the safety assessment capabilities of various commercial and open-source large language models (LLMs).
 - Proposed a hard few-shot chain-of-thought (CoT) prompt engineering based on a safety committee mechanism.
 - Developed a "brainstorming" in-context learning approach based on an LLM safety committee to generate high-quality safe corpora.
 - Achievements:
 - Increased the safety evaluation response rate to 100% compared to the original prompt engineering.
 - Compared to few-shot CoT, improved the precision of unsafe responses by 8.0%, recall by 5.3%, and F1 score by 7.7% from the SOTA LLM.

Research Publications

Conference Proceedings

- 1 **Yuecheng Li**, J. Chen, C. Chen, L. Yang, and Z. Zheng, "Contrastive Deep Nonnegative Matrix Factorization for Community Detection," in *ICASSP 2024-2024 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Accepted by ICASSP2024 (CCF B) [paper] [code].
- 2 **Yuecheng Li**, Y. Hu, L. Fu, C. Chen, L. Yang, and Z. Zheng, "Community-Aware Efficient Graph Contrastive Learning via Personalized Self-Training," in *arXiv preprint arXiv:2311.11073*, 2023, Under Review [paper].
- 3 **Yuecheng Li**, T. Wang, C. Chen, *et al.*, "Clients Collaborate: Flexible Differentially Private Federated Learning with Guaranteed Improvement of Utility-Privacy Trade-off," in *arXiv preprint arXiv:2402.07002*, 2024, Under Review [paper].

Journal Articles

- 1 J. Chen, B. Deng, **Yuecheng Li**, C. Chen, and Z. Zheng, “**Adaptable Node Alignment for Relieving Distribution Shift on Graphs**,” 2024, Submitted to **IEEE Transactions on Knowledge and Data Engineering (TKDE)**, Under Review.
- 2 S. Huang, L. Fu, **Yuecheng Li**, C. Chen, Z. Zheng, and H.-N. Dai, “**A Cross-client Coordinator in Federated Learning Framework for Conquering Heterogeneity**,” 2024, Accepted by **IEEE Transactions on Neural Networks and Learning Systems (TNNLS, CCF B)** [paper].
- 3 Z. Wu, **Yuecheng Li**, T. Liao, J. Lou, C. Chen, and Z. Zheng, “**Two Guards Need Divide and Conquer: Parallel Hybrid Protection for Privacy-preserved Federated Learning**,” 2024, Submitted to **IEEE Transactions on Information Forensics and Security (TIFS)**, Under Review.
- 4 C. Chen, **Yuecheng Li** (first author in students), Z. Wu, *et al.*, “**Privacy Computing Meets Metaverse: Necessity, Taxonomy and Challenges**,” *arXiv preprint arXiv:2304.11643*, 2023, Accepted by **Ad Hoc Networks 2024 (CCF C)** [paper] [code].
- 5 L. Fu, S. Huang, **Yuecheng Li**, C. Chen, C. Zhang, and Z. Zheng, “**Learning the Global Prompt in the Low-rank Tensor Space for Heterogeneous Federated Learning**,” 2023, Submitted to **Neural Networks**, Under Review.
- 6 L. Fu, **Yuecheng Li**, S. Huang, C. Chen, C. Zhang, and Z. Zheng, “**Parameter-oriented Contrastive Schema and Multi-level Knowledge Distillation for Heterogeneous Federated Learning**,” 2023, Submitted to **Information Fusion**, Under Review.


R&D Projects

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| 2023 | ■ Key Researcher of Algorithm , responsible for multimodal data mining involving text and tables, as well as the optimization of transformer and time series models (Merchants Union Consumer Finance Company Limited: Horizontal Project). |
| 2022 - 2023 | ■ Key Developer of System , responsible for the development of federated smart contracts based on Golang and the research on incentive mechanism design for federated learning (Open Fund: The Research on Federated Learning based on Blockchain). |


Awards and Achievements

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| 2024 | ■ First Prize (Top 1, Core Member) , SecretFlow Cup: National College Privacy Computing Competition, Organizers : Ant Group SecretFlow Open Source Community, Zhejiang University. [link] |
| | ■ Excellence Award (Top 4, Team Leader) , AI Agent Debate Competition, Organizers : Alibaba Cloud, Tongyi Lab |
| 2023 | ■ Runner-up (Solo) , AFAC2023 Fintech AI Challenge: Fund Trend Simulation Prediction Contest, Organizers : CCF, Ant Group. [link] |
| | ■ Excellence Award (Top 6, Solo) , ICDM 2023 TuGraph Competition: Pretrained Model-based Community Detection and Fraudulent Group Mining, Organizers : ICDM2023, Ant Group, Zhejiang University. |
| 2019 & 2020 | ■ Second Prize , The 11th&12th National College Student Mathematics Competition (Mathematics A Category), Organizers : Chinese Mathematical Society. |
| 2019 | ■ Second Prize (Leader) , The Guangdong Provincial Competition of the 2019 Contemporary Undergraduate Mathematical Contest in Modeling, Organizers : China Society for Industrial and Applied Mathematics. |



Invited Talk

- 2023  Inviter: **Shenzhen Transsion Holdings Co., Ltd.**
Title: **When Federated Learning Meets Differential Privacy.**




Patent

- 2023  **Community Detection Method, Apparatus, Computer Device, and Storage Medium** (Publication No. CN116383441A, Initiative for Examination as to Substance).




Related Courses

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| Graduate Course |  Data Privacy Protection and Secure Computing (94/100), Professional Practice (99/100), Machine Learning (92/100), Multimedia Content Security (92/100), Frontier and Practice of Engineering Technology (99/100). |
| Undergraduate Course |  Mathematical Analysis (93/100), Mathematical Statistics (95/100), Stochastic Processes (96/100), Optimization Methods (95/100), Applications of Matlab (100/100), Digital Signal Processing (100/100). |

Skills

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| Languages |  Strong English reading, writing, and speaking abilities (CET-6). |
| Coding & Typesetting |  Python, Matlab, L ^A T _E X, ... |
| ML Frameworks |  LightGBM, PyTorch, PyTorch Geometric, DGL, Opacus, and vLLM, ... |

Service

- 2022 - Present  **Reviewer:** CIKM2024, KDD 2024, IEEE Internet of Things Journal.
- 2022 - 2023  **Teaching Assistant:** Linear Algebra and Analytic Geometry (SYSU).
- 2019 - 2020  **Branch Secretary of the Youth League:** Class 1, Mathematics Major, SYSU (Zhuhai).

References

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| Prof. Chuan Chen
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