Yuzhe (Toby) Yang

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Education

University of California, Santa BarbaraJun. 2025 – PresentVisiting StudentSanta Barbara, CA, USAThe Chinese University of Hong Kong, ShenzhenSep. 2021 – May 2025B.Eng. in Computer Science & EngineeringShenzhen, China

Research Experiences

UCSB ERIC Lab Jul. 2025 – Present Visiting Student (Advisor: Xin Eric Wang) Santa Barbara, CA, USA Topic: Agent, Trustworthy NLP **CUHK-Shenzhen NLP Group** Jun. 2024 – Present Undergraduate Research Assistant (Advisors: Benyou Wang, Yan Hu) Shenzhen, China Topic: Multi-Agent System [C3], Human-AI Interaction [C2], Trustworthy NLP [P2] School of Management & Engineering, Nanjing University Aug. 2024 – Jan. 2025 Undergraduate Research Assistant (Advisor: Honghai Yu) Nanjing, China Topic: AI-driven Social and Economic Simulation [C3] Jun 2024 – Oct 2024 Researcher (Advisors: Jimin Huang, Qianqian Xie) Remote Topic: Financial (Vision) Language Model [P1] School of Data Science, CUHK-Shenzhen Aug. 2023 - Jun. 2024 Undergraduate Research Assistant (Advisor: Jianfeng Mao) Shenzhen, China

Publications

(† indicates equal contribution)

Conference & Workshop Papers

Topic: Spatial-Temporal Data Mining [P3, J1]

- C1. Wu, J., Chen, S., Tang, J., **Yuzhe Yang**, Chen, Y., Wang, L., Lin, S., Wang, Z., Chen, W. & Tian, Z. FDPT: Federated Discrete Prompt Tuning for Black-Box Visual-Language Models in Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV) (Hawaii, USA, Oct. 2025).
- C2. **Yuzhe Yang**[†], Zhang[†], Y., Hu[†], Y., Guo, Y., Gan, R., et al. UCFE: A User-Centric Financial Expertise Benchmark for Large Language Models in Findings of the Association for Computational Linguistics: NAACL 2025 (Albuquerque, New Mexico, Apr. 2025). https://aclanthology.org/2025.findings-naacl.300/.
- C3. Yuzhe Yang[†], Zhang[†], Y., Wu[†], M., Zhang, K., Zhang, Y., Yu, H., Hu, Y. & Wang, B. *TwinMarket: A Scalable Behavioral and Social Simulation for Financial Markets* 2025. https://arxiv.org/abs/2502.01506.

 Best Paper Award, Travel Grant Award (ICLR 2025 Workshop on Advances in Financial AI).

Journal Papers

J1. Li, C., Qi, X., **Yuzhe Yang**, Zeng, Z., Zhang, L. & Mao, J. FAST-CA: Fusion-based Adaptive Spatial-Temporal Learning with Coupled Attention for airport network delay propagation prediction. *Information Fusion* **107**, 102326. https://www.sciencedirect.com/science/article/pii/S1566253524001040 (2024).

Preprints & Technical Reports

- P1. Huang, J., Xiao, M., Li, D., Jiang, Z., Yuzhe Yang, et al. Open-FinLLMs: Open Multimodal Large Language Models for Financial Applications 2025. https://arxiv.org/abs/2408.11878.
- P2. Li, Z., Wang, X., Yuzhe Yang, Yao, Z., Xiong, H. & Du, M. Feature Extraction and Steering for Enhanced Chainof-Thought Reasoning in Language Models 2025. https://arxiv.org/abs/2505.15634.
- P3. Li, C., Lei, M., Wu, J., Yuzhe Yang, Pan, Z., Qian, X. & Mao, J. Integrative Mean-Field Epidemic Model and Adaptive Graph Learning for Network-wide Delay Propagation Dynamics Prediction 2024.
- Wu, J., Chen, S., Yuzhe Yang, Li, Y., Hou, S., Jing, R., Wang, Z., Chen, W. & Tian, Z. FedDTPT: Federated Discrete and Transferable Prompt Tuning for Black-Box Large Language Models 2024. https://arxiv.org/abs/ 2411.00985.

Awards

Best Paper Award (ICLR 2025 Workshop on Advances in Financial AI)	2025
Travel Grant Award (ICLR 2025 Workshop on Advances in Financial AI)	2025
Kaggle Silver Medal (AI Mathematical Olympiad - Progress Prize 2)	2025
Undergraduate Research Award (CUHK-Shenzhen)	2024, 2025
Outstanding College Contribution Award (CUHK-Shenzhen)	2021, 2022

Presentations

TwinMarket: A Scalable Behavioral and Social Simulation for Financial Markets

 Guest lecture for CSC6052, Spring 2025, CUHK-Shenzhen 	Apr. 2025
 Contributed talk at the ICLR 2025 Workshop, Singapore 	Apr. 2025
• Invited talk at the Wisemodel Open-source Series (Virtual)	May 2025

Projects

Quant-GPT: Money is All You Need [online] | PyTorch, Transformers, ChromaDB May 2024 Multi-Agent system for A-share market investment decisions.

- Fine-tuned LLM with sentiment analysis and real-world market data integration
- Implemented RAG and multi-agent systems for dynamic financial news synthesis
- Achieved Sharpe Ratio: 0.40, Annualized Return: 7.26%, Max Drawdown: 13.61%

Travel Insurance Recommendation AI System [online] | PyTorch, LangChain

Apr. 2024

Spatial-Temporal Model for flight delay prediction and personalized travel insurance recommendation.

- Fine-tuned LLM using insurance corpus for domain-specific question-answering
- Achieved 83% accuracy in identifying user intent for insurance recommendations
- Integrated GNN-based deep learning and LLM agents for delay prediction and sentiment assessment

Technical Skills

Programming Languages: Python, C/C++, HTML/CSS

Developer Tools: Pytorch, Transformers, LangChain, Faiss, Git, Slurm

Services

Reviewer: IJCAI 2025, ICLR 2025 Workshop, ACL 2025 SRW

Organizer: Reading Seminar at CUHK-Shenzhen