Yuzhe (Toby) Yang

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Short Bio

Yuzhe (Toby) Yang is a final-year undergraduate student at The Chinese University of Hong Kong, Shenzhen. His research focuses on building reliable and trustworthy AI systems that bridge the gap between machines and the real world. His interests include (vision) language models, interactive agents, and model interpretability. He aims to improve the robustness, alignment, and transparency of AI systems through grounded reasoning, world modeling, and the analysis of internal mechanisms in large language models.

Education

The Chinese University of Hong Kong, Shenzhen　　Sep. 2021 – May 2025
B.Eng. in Computer Science & Engineering　　Shenzhen, China

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]

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

Publications

(† indicates equal contribution)

Conference & Workshop Papers

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 Chain-of-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.

P4. 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 | 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 | 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

Skills

Programming Languages: Python, C/C++, HTML/CSS
Developer Tools: Pytorch, Transformers, LangChain, Faiss, Git, Slurm