

# Lumingyuan Tang

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## Summary

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Machine learning researcher&Engineer with industry experience in large language models, and reasoning systems, Founding Member@ SylphAI, and 600+ citation in Google Scholar.

## Work Experience

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### SylphAI

Founding Engineer

- Building AdaL, the teminal Agent CLI: Founding Co-Author.
- Deep Research in Terminal Agent.

2025 /11 – Present

San Francisco, California

### Recommendation Team, TikTok

Machine Learning Engineer

- PoC Owner for EU E-commerce Live For U Page Draw Independent Ranking Service.
- LLM Reasoning for Recommendation: Tackled cold-start recommendation challenge in e-commerce by combining Prompt2C LLM prompting with follower-relation-based graph user/item profiling; Increased product exposure rate by 12.4% in cold-start user group, validated via A/B testing over two-week window.
- Ranking Entry Room model Scaling: from DIN to SoftMoE, TokenMixer framework, enabling scalable feature specialization and increasing model offline AUC by 3.8%.

2025/01 – 2025/11

San Jose, California

### International Digital Economy Academy (IDEA Research)

Research Machine Learning Engineer, Advisor: Prof. Jian Guo, Prof. Harry Shum

2022/08 – 2024/03

Shenzhen, China

- Talked to the investment client in Hong Kong and China; Developed a financial Q&A system combining Llama 2 and a curated financial knowledge graph, achieving 88.3% accuracy on public benchmark FinQA, outperforming baseline by 7%.
- Finance LLM Pixiu: Performed post-training using knowledge graph. Involved the strategic selection of knowledge graph triplets as dynamic prompts for GPT-4, which refined the model's understanding and generation of finance-specific content.

## Selected Projects

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**Finance Bro:** a Quant Agent help you invest and make your decision. [\[GitHub\]](#) (Over 100 stars)

2025/05

Founder

- An advanced platform Agent combining portfolio management, time series forecasting, custom formula modeling, research automation, and agent-based execution for both personal and professional financial decision-making.

**ToG:** Complex multi-hop Reasoning Agent over Knowledge Graph. [\[GitHub\]](#) (Over 500 stars)

2023/11

Main Contributor, First Co-Author

- Designed and implemented a multi-hop reasoning framework combining LLMs and external KGs; achieved SOTA on 6 KBQA benchmarks and surpassed standard RAG baselines in accuracy.

## Education

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### University of Southern California

M.S. in Computer Science

2023/01 – 2024/12

Los Angeles, USA

### Nankai University

B. Eng. in Software Engineering

2018/09 – 2022/06

Tianjin, China

## Selected Publication

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- **Think-on-Graph: Deep and Responsible Reasoning of Large Language Model with Knowledge Graph, First Co-Author ICLR 2024.**
  - Achieved SOTA on 6 KBQA benchmarks and surpassed standard RAG baselines in accuracy.
  - First and one of the most important Knowledge Based Question Answering Paradigm of combining Knowledge Graph and Large Language Model.

- **Multi-Step Time Series Inference Agent for Reasoning and Automated Task Execution, AAAI 2026 submitted**
  - Proposed a framework for multi-step time series reasoning with LLMs; created a multimodal dataset pairing real time-series signals with textual task descriptions. Achieved 83.5% accuracy on complex forecast QA tasks.
  - created a multimodal dataset pairing real time-series signals with textual task descriptions. Achieved 83.5% accuracy on complex forecast QA tasks.
- **Learning to Ponder: Adaptive Reasoning in Latent Space, ICLR 2026 submitted**
  - Proposed a latent-pondering controller (1 M params) that cuts LLM inference FLOPs by 25 % without backbone finetuning; implemented with Group-Relative Policy Optimization.

## **Technical Skills**

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- Programming: Python, C++, SQL
- ML/DL Frameworks: PyTorch, HuggingFace, CUDA
- MLOps & Infra: Docker, AWS, Linux, Git, Hadoop, MongoDB

## **Awards & Honors**

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- **TOP 3 Winner**, Scoop AI Hackathon: Silicon Valley Bowl
- **ICLR Student Travel Grant**, International Conference on Learning Representations
- **the Third Prize in the North China Division**, WeChat Mini Program Application Development Contest
- **Media Report by People Daily**: 2023 IDEA conference: Let LLM deal with complex problems