Yiming Lu

Contact Information

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Research Interests

large language models, natural language processing, reasoning, planning, decision making, deep learning, reinforcement learning, artificial intelligence

Education

Emory University, Atlanta, GA August 2023–Present
Ph.D., Computer Science. GPA: 4.0/4.0

- Advisor: Dr. Fei Liu

Tsinghua University, Beijing, China August 2019–July 2023
B.E., Automation. GPA: 3.5/4.0

Work Experience

Research Intern, GenAI June 2025 - August 2025
Zoom Video Communications Topics: Multi-agent, LLM application *Bellevue, WA*

Scholarly Works

- **Communication to Completion: Modeling Collaborative Workflows with Intelligent Multi-Agent Communication** *Under Review*
  Yiming Lu, Xun Wang, Simin Ma, Shujian Liu, Sathish Reddy Indurthi, Song Wang, Haoyun Deng, Fei Liu, Kaiqiang Song https://arxiv.org/abs/2510.19995
  In this work, we introduce Communication to Completion (C2C), a scalable multi-agent framework that enhances task oriented collaboration through structured communication. C2C features the Alignment Factor (AF), a novel metric quantifying task understanding, and a Sequential Action Framework that enables cost aware communication decisions. Evaluated on realistic coding workflows across varying team sizes and complexity tiers, C2C reduces task completion time by 40%, establishing both theoretical foundations and practical utilities for communication efficient multi-agent systems.
- **STRUX: An LLM for Decision-Making with Structured Explanations**
  Yiming Lu, Yebowen Hu, Hassan Foroosh, Wei Jin, Fei Liu *NAACL 2025*
  https://aclanthology.org/2025.naacl-short.11/

  In this work, we introduced a new framework, STRUX, which enhances LLM decision-making by providing structured explanations. These include favorable and adverse facts related to the decision, along with their respective strengths. STRUX has been evaluated on the challenging task of forecasting stock investment decisions based on earnings call transcripts and demonstrated superior performance against strong baselines. It also enhances decision transparency.
- **DeFine: Enhancing LLM Decision-Making with Factor Profiles and Analogical Reasoning**
  Yebowen Hu, Xiaoyang Wang, Wenlin Yao, **Yiming Lu**, Daoan Zhang, Hassan Foroosh, Dong Yu, Fei Liu https://aclanthology.org/2025.findings-acl.238/ *ACL 2025 Findings*

Research Presentations

Poster, NAACL 2025: STRUX: An LLM for Decision-Making with Structured Explanations

Technical Skills

Programming: Python, C, C++, LaTeX, MATLAB
Frameworks: PyTorch, LLaMA Factory, TensorFlow, TRL, VeRL, OpenRLHF

Research Experience

Instant NGP and Neural Scene Reconstruction January 2022–May 2022
Tsinghua BBNC Laboratory Project

- Built drone-swarm multi-view capture system for large scenes.
- Achieved real-time NeRF rendering with hash encoding.

High-speed Compressive Imaging System January 2022
Tsinghua BBNC Laboratory Project

- Achieved 4.6G voxels/s throughput at 10MP resolution for high-speed imaging.
- Designed HCA-SCI system integrating dynamic LCoS and lithography mask.

Super-resolution Network Development April 2021–July 2021
Student Research Project

- Implemented SoTA super-resolution architectures from top conferences; conducted systematic literature review on deep learning approaches for video enhancement.