

# Yiming Lu

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| CONTACT INFORMATION    | 400 Dowman Drive, W302, Atlanta, GA 30322<br>GitHub: <a href="https://github.com/BUILDERlym">github.com/BUILDERlym</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | E-mail: <a href="mailto:yiming.lu@emory.edu">yiming.lu@emory.edu</a><br>LinkedIn: <a href="https://www.linkedin.com/in/yiming-lu-450080297/">linkedin.com/in/yiming-lu-450080297/</a> |
| RESEARCH INTERESTS     | large language models, natural language processing, reasoning, planning, decision making, deep learning, reinforcement learning, artificial intelligence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                       |
| EDUCATION              | <b>Emory University</b> , Atlanta, GA<br>Ph.D., Computer Science. GPA: 4.0/4.0<br>• Advisor: Dr. Wei Jin, Dr. Fei Liu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | August 2023–Present                                                                                                                                                                   |
|                        | <b>Tsinghua University</b> , Beijing, China<br>B.E., Automation. GPA: 3.5/4.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | August 2019–July 2023                                                                                                                                                                 |
| WORK EXPERIENCE        | <b>Research Intern, GenAI</b><br><i>Zoom Video Communications</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | June 2025 - August 2025<br><i>Bellevue, WA</i><br>Topics: Multi-agent, LLM application                                                                                                |
| SCHOLARLY WORKS        | <ul style="list-style-type: none"><li>• <b>Communication to Completion: Modeling Collaborative Workflows with Intelligent Multi-Agent Communication</b> <i>Under Review</i><br/><b>Yiming Lu</b>, Xun Wang, Simin Ma, Shujian Liu, Sathish Reddy Indurthi, Song Wang, Haoyun Deng, Fei Liu, Kaiqiang Song<br/><a href="https://arxiv.org/abs/2510.19995">https://arxiv.org/abs/2510.19995</a><br/>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.</li><li>• <b>STRUX: An LLM for Decision-Making with Structured Explanations</b><br/><b>Yiming Lu</b>, Yebowen Hu, Hassan Foroosh, Wei Jin, Fei Liu<br/><a href="https://aclanthology.org/2025.naacl-short.11/">https://aclanthology.org/2025.naacl-short.11/</a> <i>NAACL 2025</i><br/>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.</li><li>• <b>DeFine: Enhancing LLM Decision-Making with Factor Profiles and Analogical Reasoning</b><br/>Yebowen Hu, Xiaoyang Wang, Wenlin Yao, <b>Yiming Lu</b>, Daoan Zhang, Hassan Foroosh, Dong Yu, Fei Liu<br/><a href="https://aclanthology.org/2025.findings-acl.238/">https://aclanthology.org/2025.findings-acl.238/</a> <i>ACL 2025 Findings</i></li></ul> |                                                                                                                                                                                       |
| RESEARCH PRESENTATIONS | <b>Poster, NAACL 2025: STRUX: An LLM for Decision-Making with Structured Explanations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                       |
| TECHNICAL SKILLS       | <b>Programming:</b> Python, C, C++, LaTeX, MATLAB<br><b>Frameworks:</b> PyTorch, LLaMA Factory, TensorFlow, TRL, VeRL, OpenRLHF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                       |
| RESEARCH EXPERIENCE    | <b>Instant NGP and Neural Scene Reconstruction</b><br><i>Tsinghua BBNC Laboratory Project</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | January 2022–May 2022                                                                                                                                                                 |
|                        | <ul style="list-style-type: none"><li>• Built drone-swarm multi-view capture system for large scenes.</li><li>• Achieved real-time NeRF rendering with hash encoding.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                       |
|                        | <b>High-speed Compressive Imaging System</b><br><i>Tsinghua BBNC Laboratory Project</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | January 2022                                                                                                                                                                          |
|                        | <ul style="list-style-type: none"><li>• Achieved 4.6G voxels/s throughput at 10MP resolution for high-speed imaging.</li><li>• Designed HCA-SCI system integrating dynamic LCoS and lithography mask.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                       |
|                        | <b>Super-resolution Network Development</b><br><i>Student Research Project</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | April 2021–July 2021                                                                                                                                                                  |
|                        | <ul style="list-style-type: none"><li>• Implemented SoTA super-resolution architectures from top conferences; conducted systematic literature review on deep learning approaches for video enhancement.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                       |