

Xin Liang

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EDUCATION

Tongji University

Shanghai, China

Bachelor of Engineering in Software Engineering, GPA: 90.40/100, IELTS: 7

Sep. 2021 – July. 2025

- **Main Courses:** Linear Algebra, Advanced Mathematics, Probability and Statistics, Discrete Maths, Advanced Language Programming Practice, Data Structure, Algorithm, Operating System, Principles of Database and Applications, Computer Organization, User Interface Interaction, Principles of Compilers, Computer Architecture, Introduction to Artificial Intelligence, Speech Recognition, Introduction to Computer Vision, Software Engineering

Hong Kong University of Science and Technology

Hong Kong, China

Visiting Student, supervisor: Prof. Xiaojuan Ma

July 2023 – Aug. 2023

Tongji University

Shanghai, China

Freshman in Architecture and Urban Planning

Sep. 2020 – Sep. 2021

- **Main Courses:** Introduction to Architecture, Field Trip of Art Modeling, Art Modeling, Introduction of Design, Fundamentals of Design, Foundations of digital design

EXPERIENCE

Research Intern

March. 2025 – Current

Stony Brook University, supervised by Dr. Chenyu You

Remote

- Invented a **sparse adaptation framework**—**STAN**, that replaces fixed low-rank adapters with input-dependent top-K routing, enabling dynamic subspace composition and interpretable representations.
- Demonstrated **consistent performance gains** across language understanding, multimodal VLMs, reasoning, and generative style alignment.
- Built a **prefill only shadow pass** to collect sparse activations without changing the decoding process, avoiding stochastic sampling in decoding and ensuring reproducible, fair logging.
- **Project lead** for **SlideGen**, a multi-VLM agentic framework that converts full papers into well-designed, template-interpretable slide decks via modular planning, asset matching, layout selection, and refinement.
- Proposed **geometry-aware density**, a function based metric for **layout aesthetics** and **viewer comfort**, showing strong alignment with human perception.

Research Intern

Apr. 2024 – Jan. 2025

University of Rochester, supervised by Dr. Chenliang Xu

United States

- Developed a simulation environment integrating a self-consuming loop for synergistic training between generative and classification models.
- Investigated the impact of synthetic data generation on bias in image classification models, focusing on subgroup bias analysis.
- Conducted hundreds of experiments on datasets including Colorized MNIST, CIFAR-20/100, and Hard ImageNet to assess fairness metrics across generations.

Research Intern

Jan. 2023 – Mar. 2024

MIT City Science Lab@Shanghai, supervised by Yan Zhang and Jiajie Li

Remote

- Developed and deployed a custom token named SCRBT on Sepolia testnet, involving smart contract creation in Solidity, deployment using Truffle, and interaction/verification via MetaMask.
- Developed and optimized modular **smart contracts** using Solidity and deployed ABDK Libraries to enhance computational capabilities, overcoming the limitations of floating-point operations in Solidity.
- Conducted extensive research into Decentralized Application (DApp) development, using tools like Hardhat to streamline smart contract interactions with front-end and back-end systems, contributing to the lab's innovative block-chain solutions.

PROJECTS

ETH Beijing Hackathon 2023 | *Blockchain, Web Development*

Apr. 2023 – Apr. 2023

- Developed FactLENS, a decentralized news validation ecosystem. This included a user-friendly browser plugin and a comprehensive website, featuring advanced functionalities like user-contributed ratings and consensus mechanisms for truth verification.
- Worked collaboratively in a team to design, prototype, and present the FactLENS project, demonstrating effective use of agile methodologies

JourneyCam | *SwiftUI, Unity*

May 2023 – Sep. 2023

- Developed JourneyCam, a VR-Assisted Photography Teaching iOS App, which earned the Second Prize at the 2023 Mobile App Innovation Competition.
- Led a team through the design and development phases, ensuring a user-friendly interface and engaging experience. Utilized Swift and VR technologies to provide immersive, interactive photography tutorials, featuring customizable virtual scenarios and real-time feedback.

HONORS & AWARDS

2023 Mobile App Innovation Competition Second Prize

Sep. 2023

National Association for Computer Education in Colleges and Universities

Second Prize of Asia Pacific Cup Mathematical Modeling

May 2023

APMCM Organizing Committee

Third Prize of Shanghai National University Student Mathematical Modeling

Nov. 2022

Shanghai Municipal Education Commission

”Internet+” Innovation and Entrepreneurship Competition Bronze Award

Sep. 2022

Tongji University

PUBLICATIONS

- [1] **Xin Liang**, Xiang Zhang, Yiwei Xu, Siqi Sun, and Chenyu You. “SlideGen: A Multi-Agent Framework for Automatic Scientific Slide Generation”. In: *In Submission*. 2025.
- [2] Yifan Wang*, **Xin Liang***, Aosong Feng, Haocheng Dai, Tiansheng Wen, Lixuan Guo, Yifei Wang, and Chenyu You. “From Compression to Selection: Sparse Adaptation for Fine-Tuning Large Models”. In: *In Submission*. *These authors contributed equally. 2025.
- [3] Zeliang Zhang*, **Xin Liang***, Mingqiang Feng, Susan Liang, and Chenliang Xu *These authors contributed equally to this work. “Will the Inclusion of Generated Data Amplify Bias Across Generations in Future Image Classification Models?” In: *In Submission*.
- [4] Hejie Cui*, Lingjun Mao*, **Xin Liang**, Jieyu Zhang, Hui Ren, Quanzheng Li, Xiang Li, and Carl Yang. *These authors contributed equally to this work. *Biomedical Visual Instruction Tuning with Clinician Preference Alignment*. Accepted by NeurIPS 2024 Track Datasets and Benchmarks. 2024. URL: <https://BioMed-VITAL.github.io>.
- [5] Hanfang Lyu, Yuanchen Bai, **Xin Liang**, Ujaan Das, Chuhan Shi, Leiliang Gong, Yingchi Li, Mingfei Sun, Ming Ge, and Xiaojuan Ma. “FARPLS: A Feature-Augmented Robot Trajectory Preference Labeling System to Assist Human Labelers’ Preference Elicitation”. In: *Proceedings of the 29th International Conference on Intelligent User Interfaces*. IUI ’24. ACM, Mar. 2024. DOI: 10.1145/3640543.3645145. URL: <http://dx.doi.org/10.1145/3640543.3645145>.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL, JavaScript, HTML/CSS

Model Serving & Inference: vLLM (OpenAI-compatible API), FastAPI

Model Training & Fine-tuning: Hugging Face Transformers, ms-swift (ModelScope Swift), PEFT

Frameworks: React, Node.js, Flask, robosuite

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm, Linux

Libraries: pandas, NumPy, Matplotlib