Yimin Wang

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Education

University of Michigan, Ann Arbor   *Ann Arbor, MI*
B.S.E. in Data Science, GPA: 3.93/4.00   *Aug 2024 – May 2026*

- **Relevant Courses:** Machine Learning (A), Natural Language Processing (A), Statistics and Artificial Intelligence (A^+), Applied Regression Analysis (A^+), Probability and Statistics (A^+), Linear Algebra (A^+)
- **Scholarships & Awards:** Deans' List, University Honors

Shanghai Jiao Tong University   *Shanghai, China*
B.S. in Mechanical Engineering, GPA: 3.74/4.00 (top 10%)   *Aug 2022 – Aug 2026*

- **Relevant Courses:** Programming and Elementary Data Structures (A), Data Structures and Algorithms (A), Design and Manufacturing I (A)/II (A), Laboratory I (A), Solid Mechanics (A), Dynamics and Vibrations (A^+)
- **Scholarships & Awards:** 2023 The John Wu & Jane Sun Sunshine Scholarship (**Top 6%**); Chun-Tsung Scholar & Scholarship[1]

Publications

* indicates equal contribution.

On Path to Multimodal Historical Reasoning: HistBench and HistAgent   2025

Jiahao Qiu*, Fulian Xiao*, **Yimin Wang***, Yuchen Mao*, Yijia Chen*, Xinzhe Juan, Siran Wang, Xuan Qi, Tongcheng Zhang, Zixin Yao, ..., Xi Gao, Mengdi Wang
In submission to the top conference. https://arxiv.org/abs/2505.20246 ↗

AgentDistill: Training-Free Agent Distillation with Generalizable MCP Boxes   2025

Jiahao Qiu*, Xinzhe Juan*, **Yimin Wang***, Ling Yang*, Xuan Qi, Tongcheng Zhang, Jiacheng Guo, Yifu Lu, Zixin Yao, Hongru Wang, Shilong Liu, Xun Jiang, Liu Leqi, Mengdi Wang
In submission to the top conference. https://arxiv.org/abs/2506.14728 ↗

EmoAgent: Assessing and Safeguarding Human-AI Interaction for Mental Health Safety   2025

Jiahao Qiu*, Yinghui He*, Xinzhe Juan*, **Yimin Wang**, Yuhan Liu, Zixin Yao, Yue Wu, Xun Jiang, Ling Yang, Mengdi Wang
***EMNLP** 2025 MainConference, Oral Presentation.*   https://aclanthology.org/2025.emnlp-main.594/ ↗

GenoArmory: A Unified Evaluation Framework for Adversarial Attacks on Genomic Foundation Models   2025

Haozheng Luo*, Chenghao Qiu*, **Yimin Wang**, Shang Wu, Jiahao Yu, Han Liu, Binghui Wang, Yan Chen
In submission to the top conference. https://arxiv.org/abs/2505.10983 ↗

Alita-G: Self-Evolving Generative Agent for Agent Generation   2025

Jiahao Qiu*, Xuan Qi*, Hongru Wang*, Xinzhe Juan, **Yimin Wang**, Zelin Zhao, Jiayi Geng, Jiacheng Guo, Peihang Li, Jingzhe Shi, Shilong Liu, Mengdi Wang
In submission to top conference. https://arxiv.org/abs/2510.23601 ↗

Alita: Generalist Agent Enabling Scalable Agentic Reasoning with Minimal Predefinition and Maximal Self-Evolution   2025

Jiahao Qiu*, Xuan Qi*, Tongcheng Zhang*, Xinzhe Juan, Jiacheng Guo, Yifu Lu, **Yimin Wang**, Qihan Ren, Xun Jiang, Xing Zhou, Dongrui Liu, Ling Yang, Yue Wu, Kaixuan Huang, Shilong Liu, Hongru Wang, Mengdi Wang
In submission to top conferene. https://arxiv.org/abs/2505.20286 ↗

High-precision control of an antagonistic soft continuum robot for dexterous objects grasping and assembly   2025

Shoulu Gong, Xinchen Ye, **Yimin Wang**, Wenbo Li, Wenming Zhang, Lei Shao
Published in *Sensors and Actuators A: Physical.* https://www.sciencedirect.com/science/article/pii/S0924424725004753 ↗

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[1] Funded by Nobel Laureate Tsung-Dao Lee and his wife Hui-Chun Chin to support undergraduate research; selected from top universities in China (e.g., SJTU, PKU, Fudan) with roughly 50 students per institution annually.

A Novel Approach to Air Quality Monitoring: Towards Miniature, Self-organized, and Low-power Device 2023

Tao Wang, Yu Wu, Wangze Ni, Jianhua Yang, **Yimin Wang**, Jiaqing Zhu, Ming Zeng, Nantao Hu, Zhi Yang
2023 *IEEE SENSORS*. https://ieeexplore.ieee.org/document/10325267 ↗

Research Experience

Wang Lab@Princeton AI for Accelerating Invention *Remote*
Princeton University (Advisor: Prof. Mengdi Wang) *Oct 2024 – Present*

- Conducted systematic research on multimodal multi-agent systems, contributing to projects on historical reasoning, safety alignment, and model distillation using AutoGen or smolagents.
- Developed multimodal agent (with GPT-4o as backbone) for historical reasoning as co-leader, including integrating OCR/retrieval tools, etc., and conducted evaluations on HistBench, Humanity's Last Exam subset, and GAIA, outperforming GPT-4o, DeepSeek-R1, Grok-3 with online search and HuggingFace/smolagents open deep research(GPT-4o).
  https://github.com/CharlesQ9/HistAgent ↗
- Proposed training-free distillation method through which weaker agents inherit complex skills from stronger "teacher" agents via dynamically-generated Model Context Protocols (MCPs) based on past experience. We enabled an agent based on the 8B model to match the performance of an agent based on GPT-4o.
- Helped build EmoAgent, a multi-agent framework utilizing clinical metrics (e.g., PHQ-9) to assess LLM safety, revealing a 34.4% mental state deterioration rate in vulnerable user simulations. It mitigates psychological risks in human-AI conversations; assessed model sensitivity and contributed to the paper rebuttal, and the paper was accepted by the EMNLP main conference as oral.
  https://github.com/1akaman/EmoAgent ↗
- Currently leading research project on cost-efficient model selection, dynamically distributing queries between LLM and agents via previous experience to achieve cost-performance trade-offs without relying on expensive supervision when there is no ground truth.
- Contributed to Alita, a general agent designed with minimal pre-definition that achieved Top-1 performance on the GAIA benchmark (May 2025). Helped advance the system to Alita-G, a self-evolving framework that transforms into a domain expert via automated workflow curation, securing a new SOTA record.

Wu Laboratory *Remote*
Princeton University (Advisor: Prof. Sanfeng Wu) *June 2025 – Present*

- Helped build the world's first multi-agent framework for automated 2D quantum material discovery, coordinating planning, control, and processing agents for exfoliation, flake search, and stacking together with monitoring agents.
- Designed system-level monitoring and safety mechanisms that can improve process stability, fault recovery, and consistency in automated material construction. Plan to submit to the top journal.

Northwestern Lab for Internet and Security Technology *Remote*
Northwestern University (Advisor: Prof. Yan Chen) *April 2025 – Present*

- Investigated adversarial robustness and safety of large language and genomic foundation models, contributing to GenoArmory, a unified benchmark for adversarial attack and defense evaluation.
  https://github.com/MAGICS-LAB/GenoArmory ↗
- Performed literature review and experiments on LLM thinking safety and participated in building and fine-tuning an LLM specialized for cloud-configuration Q&A.

LAUNCH Lab *Ann Arbor, MI, USA*
University of Michigan (Advisor: Prof. Lu Wang) *June 2025 – Present*

- Currently researching the reasoning process of large language models in code generation, aiming to understand how the model's reasoning behavior affects overall performance.
- Studying overthinking behaviors in large language models for code generation, focusing on how we can mitigate the overthinking phenomenon during decoding, after the analysis of the thinking traces for code.

Department of Micro/Nano Electronics *Shanghai, China*
Shanghai Jiao Tong University (Advisor: Prof. Jianhua Yang) *Sep 2023 – May 2024*

- Focused on a low-power intelligent gas sensor, conducted sensor experiments, data collection, and contributed to refining the dataset.
- Built and improved analytical models for electronic nose signals in Python.
- Integrated four machine learning algorithms to improve the accuracy of predicting gas type and concentration for unknown mixtures.

Teaching Experience

Grader for EECS 496: Professionalism (Major Design Experience) *Ann Arbor, USA*
University of Michigan *Sep 2025 – Dec 2025*

Teaching Assistant for ME395: Laboratory I *Shanghai, China*
Shanghai Jiao Tong University *Sep 2024 – Dec 2024*

Teaching Assistant for ENGR100: Introduction to Engineering *Shanghai, China*
Shanghai Jiao Tong University *May 2024 – Aug 2024*

Technical Skills

Languages: C/C++, Python, HTML/CSS, JavaScript, SQLite, R, Elm

Frameworks: PyTorch, scikit-learn, LangChain, AutoGen, HuggingFace/smolagent

Tools: Git, Linux, Shell, Jupyter Notebook, LaTeX

Selected Honors & Awards

Chun-Tsung Scholar & Scholarship *2025*
- Funded by Nobel Laureate Tsung-Dao Lee and Hui-Chun Chin to support undergraduate research; selected from top universities in China (e.g., SJTU, FDU, PKU) with roughly 50 students selected per institution annually.

The John Wu & Jane Sun Sunshine Scholarship *2023*
- Awarded to the top 6% of students at Shanghai Jiao Tong University for academic excellence and social responsibility.

University Honors & Dean's List *2024, 2025*
- University of Michigan, College of Engineering.

Undergraduate Excellent Scholarship *2023, 2024*
- Awarded to students demonstrating outstanding academic performance and comprehensive achievements at Shanghai Jiao Tong University.

Student Development Scholarship *2023*
- Recognized for all-around development and excellence in extracurricular and academic pursuits.

Freshman Robotics Competition Best Design Award *2023*
- Recognized for the most innovative mechanical design among 50+ participating teams.

Excellent League Member *2023*
- Shanghai Jiao Tong University (Awarded for outstanding leadership in student organization activities).

Leadership & Service

Minister, Arts Department, Student Union *Sep 2023 – Aug 2024*
UM-SJTU Joint Institute, Shanghai Jiao Tong University
- Planned and held large-scale campus cultural events, including the "Blossom" Ball (300+ attendees) and the Top 10 Singers Competition, handling logistics, budgeting, and team coordination.
- Guided department members and facilitated cross-departmental collaboration to enable smooth event execution.

Minister, Youth Volunteer Service Team *Sep 2023 – Aug 2024*
UM-SJTU Joint Institute, Shanghai Jiao Tong University
- Directed recruitment and training for Miyuan Volunteer Team and educational outreach programs.
- Organized "Sunshine Home" initiative to support intellectually disabled individuals and held labor education.

Class Advisor *Aug 2023 – Aug 2024*
UM-SJTU Joint Institute, Shanghai Jiao Tong University
- Served as primary mentor for a freshman class, providing academic guidance, organizing team-building activities, and helping students adapt to university life.

Volunteer Student Teacher *Jan. 2023, May 2023,*
Yunnan & Huzhou, China *Jan. 2024*
- Contributed to educational support programs in rural areas of Yunnan and Huzhou provinces.
- Taught curriculum in STEM and English and organized extracurricular activities to foster student bonding.

References

Prof. Mengdi Wang
Professor of Electrical and Computer Engineering and the Center for Statistics and Machine Learning, Princeton University
Associated Faculty in Computer Science, Affiliated Faculty to Omenn-Darling Institute of Bioengineering
mengdiw@princeton.edu ↗

Prof. Sanfeng Wu
Assistant Professor of Physics, Princeton University
Associated Faculty at Princeton Materials Institute & Princeton Quantum Initiative
sanfengw@princeton.edu ↗

Prof. Yan Chen
Professor of Computer Science, Robert R. McCormick School of Engineering and Applied Science, Northwestern University
Lead the Northwestern LIST (Lab for Internet and Security Technology)
ychen@northwestern.edu ↗

Prof. Jianhua Yang
Associate Professor, Department of Micro/Nano Electronics, Key Laboratory of Thin Film and Microfabrication (Ministry of Education), School of Electronic Information and Electrical Engineering, Shanghai Jiao Tong University
yangjh08@sjtu.edu.cn ↗

Dr. Shilong Liu
Postdoctoral Research Fellow, Princeton AI Lab, Princeton University
Ph.D. from Tsinghua University; Former Research Scientist at Bytedance Seed
sl8264@princeton.edu ↗