Ziyang Xiong

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EDUCATION

University of Michigan **Ann Arbor, MI**
Bachelor of Data Science *April 2025*
- Coursework: Data Mining, Foundation of LLM, Database Mgmt Systems, Data Structures & Algorithms
- GPA: 3.96/4.00

Shanghai Jiaotong University **Shanghai, China**
Bachelor of Electronic and Computer Engineering *August 2025*
- GPA: 3.65/4.00

PUBLICATIONS

- **[1]** "Safeguard is a Double-edged Sword: Denial-of-service Attack on Large Language Models"
  ICLR 2025, In Review
  Qingzhao Zhang, **Ziyang Xiong**, Z. Morley Mao
- **[2]** "Map2Text: New Content Generation from Low-Dimensional Visualizations"
  WWW 2025, In Review
  Xingjian Zhang, **Ziyang Xiong**, Shixuan Liu, Yutong Xie, Tolga Ergen, Dongsub Shim, Hua Xu, Honglak Lee, Qiaozhu Mei
- **[3]** "MASSW: A New Dataset and Benchmark Tasks for AI-Assisted Scientific Workflows"
  ACL 2024, In Review
  Xingjian Zhang, Yutong Xie, **Ziyang Xiong**, et al.

WORK EXPERIENCE

China Telecommunications Corporation Wuhan, China
Technical Development Programmer *Dec 2022 - Feb 2023*
- Developed an advanced cloud-based platform for real-time aggregation, intelligent analysis, and automated dissemination of device fault data.
- This platform *analyzes user-reported errors*, *identifies the appropriate resolution departments*, seamlessly transfers data to relevant teams, and generates daily reports automatically for efficient issue tracking.

SOTA LAB Ann Arbor
Research Assistant *May 2024 - Current*
- Conducted experiments to optimize large language models (LLMs) with *in-context learning*, focusing on improving sample efficiency and preserving model integrity.
- Optimized the *Transformer's attention mechanism*, focusing on structural improvements and algorithmic enhancements to boost model performance.

PROJECT EXPERIENCE

Foreseer Lab Dec 2023 - Current
- Enabled advanced research innovation by developing *MASSW*, a dataset that leverages LLMs to summarize and analyze scientific workflows from publications, supporting machine-learning tasks.
- Facilitated exploration within large-scale datasets through *Map2Text*, a task that translates spatial coordinates from low-dimensional visualizations into coherent textual content.

Scalable Web Search Engine: Similar to Google Feb 2024 - Apr 2024
- Developed a *robust search website* that provides users with the most relevant results for their queries, mimicking the functionality of large-scale search engines.
- Improved search efficiency by implementing *information retrieval* techniques such as text analysis (tf-idf) and link analysis (PageRank), along with parallel data processing using *MapReduce*.

Scientific Epidemic Prevention and Control Decisions Based on Mobile Data Aug 2022 - May 2023
- Developed agent-based simulation models to *predict human movement behavior*, simulating the dynamics of the coronavirus outbreak in Shanghai and supporting a population scale of *tens of millions*.
- Integrated *SEIR disease transmission models* to evaluate intervention measures, enabling visualization and analysis of epidemic outcomes to *support urban epidemic prevention*.

Depression Condition Predicting Oct 2023 - Dec 2023

- Collected and pre-processed biochemical data to train a model for *predicting depression* based on specific indicators.
- Compared *machine learning methods*—including bootstrap, SVM, logistic regression, and KNN—to analyze the impact of socioeconomic factors on depression outcomes.

TEACHING EXPERIMENTS

Teaching Assistant of Introduction to the Engineering Shanghai, China
Shanghai Jiaotong University *May 2023 - Aug 2023*

- Conduct weekly *office hours and lab classes* to help students with engineering problems especially in academic writing and host the symposiums.

Grader of Foundations of LLMs Ann Arbor, U.S.
University of Michigan *Aug 2024 - Dec 2024*

LEADERSHIP

The Art Department of Student Union Shanghai, China
Minister *Sep 2021 - Aug 2023*

- Organized several large-scale events such as concerts and dance parties and art & cultural festival with participation exceeding *1,000* attendees.
- Produced promotional videos that garnered over *10,000* views.

The Youth Volunteer team of UMJI Shanghai, China
minister *Sep 2021 - Aug 2023*

- Initiated and led the "Sunshine Home" program, organizing regular visits and activities to support individuals with disabilities.
- Participated in a teaching support program in Yunnan, contributing to educational initiatives in under-resourced areas and promoting equal access to education.

AWARDS

The John Wu & Jane Sun Sunshine Scholarship Oct 2022
Outstanding Student Leader Oct 2022
Outstanding volunteer Dec 2022
The Cheng Family Scholarship Jun 2023
Dean's Honor List University of Michigan, FA23
Dean's Honor List University of Michigan, WN24

SKILLS

Programming Languages: C++, C, Python, R, SQL, MATLAB, JavaScript, HTML, LaTeX, dart, etc.
Frameworks:PyTorch, TensorFlow, jax,etc.
Deep Learning: Diffusion Model, GAN, Transformer, CNN, RNN, MLP, etc