## Xiangchi Yuan

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Homepage: xiangchi-yuan.github.io

RESEARCH INTERESTS EDUCATION Large Foundation Model, Trustworthy ML, Data-centric AI

Georgia Institute of Technology, Atlanta, GA

Ph.D. in Computer Science August 2024 -

Advisor: Professor Wenke Lee

Brandeis University, Waltham, MA

M.S. in Computer Science May 2024

Brandeis University Merit Scholarship

Mentor: Mr. Chunhui Zhang, Professor Chuxu Zhang

University of Glasgow & UESTC, Glasgow, UK & Chengdu, China

B.Eng. in Electronic and Information Engineering June 2022

ONGOING PROJECTS

Model Merge Can Improve Reasoning Data Synthesize

[Slides][Code]

We find model merge for synthesizing reasoning data can iteratively improve model reasoning

performance after iterative fine-tunings.

**PAPERS** 

LaCache: Ladder-Shaped KV Caching for Efficient Long-Range Generation of Large Language Models [PDF][Code]

*Under review* | Keeping "ladder-shape" KV cache and evicting others can bring LLM efficiency and performance.

LongMamba: Enhancing Mamba's Long-Context Capabilities via Training-Free Receptive Field Enlargement [PDF][Code]

*Under review* | Identifying "global channel" and filtering corresponding tokens enhance Mamba's long context ability.

AmoebaLLM: Constructing Any-Shape Large Language Models for Efficient and Instant Deployment [PDF]

Neural Information Processing Systems (NeurIPS), 2024

Yonggan Fu, Zhongzhi Yu, Junwei Li, Jiayi Qian, Yongan Zhang, **Xiangchi Yuan**, Dachuan Shi, Roman Yakunin, Yingyan Celine Lin

Graph Cross Supervised Learning via Generalized Knowledge

[PDF][Code]

ACM International Conference on Knowledge Discovery and Data Mining (KDD), 2024.

Xiangchi Yuan, Yijun Tian, Chunhui Zhang, Yanfang Ye, Nitesh V. Chawla, and Chuxu Zhang.

Mitigating Emergent Robustness Degradation while Scaling Graph Learning *International Conference on Learning Representations (ICLR)*, 2024

[PDF][Code]

Xiangchi Yuan\*, Chunhui Zhang\*, Yijun Tian, Yanfang Ye and Chuxu Zhang

Navigating Graph Robust Learning against All-Intensity Attacks

[PDF][Code]

International Conference on Machine Learning - New Frontiers in Adversarial Machine Learning Workshop (ICML Workshop), 2023

Xiangchi Yuan, Chunhui Zhang, Yijun Tian, and Chuxu Zhang

An End-to-End 12-Leading Electrocardiogram Diagnosis System Based on Deformable Convolutional Neural Network With Good Antinoise Ability [PDF][Code] IEEE Transactions on Instrumentation and Measurement (IEEE TIM), 2021

Lang Qin, Yuntao Xie, Xinwen Liu, Xiangchi Yuan, and Huan Wang

HONORS AND AWARDS

Brandeis University Merit Scholarship (\$40,000) 2022 & 2023 2023 Brandeis University Conference Award 2020 & 2021

**UESTC** Outstanding Student Scholarship

WORKING EXPERIENCE

## VeriSilicon Microelectronics, Chengdu, China

Software Development Engineer Intern

February-May 2022

- Designed HDR adaptive curve fitting algorithm: meeting hardware requirements and keeping high precision
- Implemented CCM gamut mapping which suits hardware with fixed-point calculation for different Gamut settings
- This SoC IP was used in Google Pixel

**TEACHING EXPERIENCE** 

## Brandeis University, Waltham, MA

Head Teaching Assistant, MATH-125A Mathematics for Machine Learning

Spring 2024

**SERVICE** 

## **Program Committee/Conference Reviewer**

WWW 2023, ICML 2023, ICLR 2024, ICASSP 2024, PAKDD 2024, COLING 2024, KDD 2024, NeurIPS 2024, ICLR 2025