Yuxuan Wang

Undergraduate, Grade 2022
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BILLYisAVAILABLE
Google Scholar

Education

- **Beijing Institute of Technology** *2022.9-2026.6(Expected)*
  Undergraduate, Computer Science (Elite Class) GPA: 94.18/3.91, RANK:1/130

Experience

- **Tencent Youtu Lab** *2025.5-Present*
  Research Intern (Advisor: Junrn Lu) Tencent
  – Currently working on model structure compression.

- **GraphPKU** *2024.11-Present*
  Research Intern (Advisor: Muhan Zhang) Peking University
  – Currently working on model structure compression and LLM long context.

- **AGT Lab** *2024.2-2024.8*
  Research Intern (Advisor: Zhengyang Liu) Beijing Institute of Technology
  – Participated in a research project on algorithmic game theory.

- **MLMR Lab** *2022.9-2023.8*
  Research Assistant (Advisor: Xiabi Liu) Beijing Institute of Technology
  – Participated in the design and development of an AI-based visual programming platform.

Publications

- **Approximating EFX through a New Notion of Fairness** *2024.8*
  *Rui Dai, **Yuxuan Wang**, Zhengyang Liu, Zihe Wang, TAMC 2025*
- **Chinese Parataxis Graph Parsing Based on Large Language Models** *2024.5*
  Yueyi Sun, **Yuxuan Wang***, Proceedings of the 23rd Chinese National Conference on Computational Linguistics*

Projects

- **Model Acceleration and Long-Context Understanding via KV Cache Compression** *2025.3 - Present*
  Model Compression Advisor: Muhan Zhang

  – To develop a novel pipeline to improve attention recovery quality under a fixed compression ratio.
  – To mitigate the impact of positional encoding on the rationality of pruning decisions.
  – To minimize inference latency through cache-optimized design.

- **LooGLE V2: Are Long-Context Models Ready for Long-Dependency Challenges?** *2025.1 - Present*
  LLM Benchmark Advisor: Muhan Zhang

  – Constructed a novel benchmark to evaluate the long-context understanding capability of LLMs.
  – Achieved significant advancements in context length, long-dependency, real-world alignment, and evaluation automation.
  – NeurIPS 2025 under review.

- **Chinese Parataxis Graph Parsing Based on Large Language Models** *2024.4 - 2024.7*
  LLM Fine-tuning and Ensemble Learning Advisor: Xin Xin

  – Achieved the construction of a *Chinese Parataxis Graph* using two primary methods:
    ∗ Hyperparameter tuning of *large language models*.
    ∗ *Ensemble learning* with multiple large language models.
  – Both methods resulted in high *F1* scores.
  – Presented an oral report on this work at the evaluation session forum of the 23rd *China National Conference on Computational Linguistics (CCL)*.

- **Approximating EFX through a New Notion of Fairness** *2024.2 - 2024.8*
  Algorithm Game Theory Advisor: Zhengyang Liu
  – Focused on the classic *Envy-Free (EF)* problem, which is closely associated with *Nash Equilibrium* in game theory.
  – Proposed an innovative metric to measure *fair allocation*.
  – Developed novel models aimed at achieving a more precise approximation of *EFX*.
  – Published a arxiv preprint paper.
- **ROD: A Retinex-Based Object Detection Method** *2024.9 - 2025.1*
  (Course Project) *Digital Image Processing* Advisor: Ying Fu
  – Achieved better results for a low-light enhancement method through hyperparameter tuning.
  – Developed a novel method for target detection in low-light environments.
  – Built a software system and applied for a software copyright.
- **Research on Intelligent Recognition Technology for Non-Meteorological Targets** *2024.5 - 2024.8*
  Feature Recognition Advisor: Liang Zeng
  – This project primarily focuses on identifying non-meteorological elements in *millimeter-wave cloud radar* data using *machine learning* methods.
  – Conducted the work independently, applying *clustering algorithms* to group specific features of *atmospheric wave matrices*.
  – Achieved effective recognition results through clustering methods.
  – Successfully passed the initial evaluation of *the 23rd Research Institute of the Second Academy of China Aerospace Science and Industry Corporation (CASIC)*.
- **AiXLab AI Geometric Coding Platform** *2022.9 - 2023.8*
  An Engineering-Based Project Advisor: Xiabi Liu
  – Developed a graphical interface with integrated multilayer *neural networks*.
  – Contributed by refactoring and extending core neural network code.
  – Participated in system-level design and programming tasks for the overall platform.
  – A utility model patent has been filed for this project.

Awards

- **National Scholarship** Ministry of Education of the People's Republic of China *2024.10*
- **National Scholarship** Ministry of Education of the People's Republic of China *2023.10*
- **First-Class Academic Scholarship** Beijing Institute of Technology, *2025.3*
- **First-Class Academic Scholarship** Beijing Institute of Technology, *2024.9*
- **First-Class Academic Scholarship** Beijing Institute of Technology, *2024.3*
- **First-Class Academic Scholarship** Beijing Institute of Technology, *2023.9*
- **First-Class Academic Scholarship** Beijing Institute of Technology, *2023.3*
- **First Prize in the National College Mathematics Competition** Chinese Mathematical Society *2023.4*
- **1st Place in BIT Mathematics Competition** Beijing Institute of Technology *2022.10*
- **First Prize in the National High School Mathematics League** Chinese Mathematical Society *2021.9*
- **First Prize in the National High School Mathematics League** Chinese Mathematical Society *2020.9*
- **First Prize in the National High School Mathematics League** Chinese Mathematical Society *2019.9*

Interests

- **Model Compression**
- **Large Language Model**

Skills

- **Coding** C, C++, Python, LaTeX
- **English** CET-4: 643, CET-6: 633

Courses

Mathematical Analysis I/II, 96/94
Linear Algebra, 100
Probability Theory and Mathematical Statistics, 97
Discrete Mathematics, 99
Data Structures and Algorithms, 95
Knowledge Engineering, 100
Algorithmic Game Theory, 96
Combinatorial Mathematics, 97