# Yan Yang

### Education

#### Shanghai University of Finance and Economics

School of Computing and Artificial Intelligence

Shanghai, China Sep. 2023 — present

Master Candidate of Software Engineering

o GPA: 3.54/4.00

Advisor: Professor Yun Chen

### Shanghai University of Finance and Economics

School of Information Management and Engineering

Shanghai, China Sep. 2019 — Jun. 2023

Bachelor of Electronic Business

o GPA: 3.52/4.00, Rank: 7/44

## Research Interest

Large Language Models, Model Merge, Model Compression, LLM Safety.

### **Publications**

ImPart: Importance-Aware Delta-Sparsification for Improved Model Compression and Merging in LLMs 

E Paper 

✓ Code

- o Yan Yang, Yixia Li, Hongru Wang, Xuetao Wei, Jiangiao Yu, Yun Chen, Guanhua Chen
- o In Proceedings of ACL 2025.

- o Yan Yang, Zeguan Xiao, Xin Lu, Hongru Wang, Xuetao Wei, Hailiang Huang, Guanhua Chen, Yun Chen.
- In Proceedings of NAACL 2025.

Distract Large Language Models for Automatic Jailbreak Attack E Paper 💔 Code

- O Zeguan Xiao, Yan Yang, Guanhua Chen, Yun Chen.
- In Proceedings of EMNLP 2024.

Pi-SQL: Enhancing Text-to-SQL with Fine-Grained Guidance from Pivot Programming Languages

- o Yongdong Chi, Hanqing Wang, Yun Chen, Yan Yang, Zonghan Yang, Xiao Yan, Guanhua Chen.
- In Findings of EMNLP 2025.

# **Selected Research Experience**

ImPart: Importance-Aware Delta-Sparsification for Improved Model Compression and Merging in **LLMs** 

- Motivated by the observation that singular vectors with larger singular values encode more important task-specific information, we developed ImPart, which assigns variable sparsity ratios to singular vectors based on their corresponding singular values.
- We conducted extensive experiments on several task-specific LLMs, including WizardMath for mathematical reasoning, WizardCoder for code generation, and LLaMA-2-Chat for instruction following. Experimental results show that ImPart demonstrates  $2 \times$  higher compression efficiency than baselines.

- To further showcase its versatility, ImPart was combined with existing quantization and model merging methods. When used with quantization, ImPart achieved near-lossless performance by compressing the delta parameter to just 1/32 of its original size, while also enhancing model merge performance.
- o In Proceedings of **ACL 2025** ( $1^{st}$  Author).

### SegAR: Jailbreak LLMs with Sequential Auto-Generated Characters

- Building on existed character simulation methods for jailbreaks, SeqAR optimizes multiple characters
  and prompts LLMs to respond sequentially as these characters in a single output, thereby further
  distracting LLMs and expanding the applicable area of the generated jailbreak prompt.
- We conducted extensive experiments on open-source models (e.g., LLaMA-2 and LLaMA-3) and proprietary models (e.g., GPT-3.5-Turbo, GPT-4, GPT-4o, and Gemini).
- SeqAR achieved state-of-the-art jailbreak performance, with attack success rates > 90% on LLaMA-2 and > 85% on GPT-3.5 series models. SeqAR also exhibits strong transferability, and existing defense methods are insufficient, underscoring the widespread and critical nature of the identified vulnerabilities.
- $\circ$  In Proceedings of **NAACL 2025** (1<sup>st</sup> Author).

### Distract Large Language Models for Automatic Jailbreak Attack

- Leveraging the observation that irrelevant context can distract large language models and diminish their performance, we proposed DAP, which employs specially designed jailbreak templates embedded with irrelevant context to conceal malicious content and iteratively refines these templates using an LLM memory-reframing mechanism.
- We conducted rigorous experiments across both open-source models (e.g., Vicuna and LLaMA-2) and proprietary models (e.g., GPT-3.5-Turbo and GPT-4).
- DAP demonstrated robust jailbreak performance with a 100% attack success rate on Vicuna and nearly 80% on GPT-3.5 series models, highlighting both the severity and pervasiveness of this safety vulnerability. Moreover, when combined with other jailbreak techniques, DAP's attack performance is further enhanced.
- $\circ$  In Proceedings of **EMNLP 2024** ( $2^{nd}$  Author).

# Internship

**Toursun Synbio**Research Intern

Shanghai, China

Jun. 2022 – Feb. 2023

O Host: Yuguang Wang, Yiqing Shen

Research Topic: Multimodal Medical Classification

# **Awards**

- Outstanding Graduate of Shanghai University of Finance and Economics (top 10%). Jun. 2023
- Tailong Commercial Bank Scholarship (top 15%).

Jan. 2023

 $\circ$  Renming Scholarship,  $3^{rd}$  Prize (top 15%).

Sep. 2020 - Jun. 2023

# **Others**

- Core Technical Team Member of the N.O.P.E. Robotics Club at Shanghai University of Finance and Economics.
   Sep. 2022 – Sep. 2024
- Leader of the Academic Department of the College Student Union.

Sep. 2020 - Jun. 2021