YANG Yiliu
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Education

- **The Chinese University of Hong Kong (CUHK)** Hong Kong SAR, China
  Bachelor of Engineering in Artificial Intelligence *Sep 2020 – Jul 2024*
  - **GPA**: Cumulative GPA: 3.82/4.00, Major GPA: 3.92/4.00, GPA Rank: 1st/39
  - **Honors**: First Honor, ELITE Stream, Dean's List 2020-24
  - **Graduate-Level Courses**: Machine Learning Theory, Foundations of Optimization, Pattern Recognition

Research Experiences

- **Safety in Multi-agent LLM System** MMLab, CUHK
  Research Assistant, Supervisor: Prof. Yue Xiangyu *Feb 2025 - Present*
  - Focusing on safety and reliability in multi-agent LLM system.

- **Understanding Generalization in Generative Adversarial Networks** CUHK
  Final Year Project, Supervisor: Prof. Farzan Farnia *Sep 2023 - Jun 2024*
  - Explored the **generalization** ability of **GANs** by evaluating the effectiveness of Inception-based metrics such as FID, KID.
  - Demonstrated that Inception Features may fail to capture overfitting, highlighting the need for alternative evaluation methods without neural network reliance.

- **Machine Unlearning via Continual Learning** Purdue University
  Research Assistant, Supervisor: Prof. Ninghui Li *May 2023 - Aug 2023*
  - Conducted research on **machine unlearning** by leveraging **knowledge distillation** and **continual learning** to mitigate **membership inference attacks**.
  - Developed efficient unlearning frameworks that preserve model utility while enhancing **data privacy**.

- **Evaluating and Improving Logical Reasoning Ability of LLMs** CUHK
  Research Assistant, Supervisor: Prof. Michael R. Lyu *Feb 2023 - Jun 2023*
  - Developed the core code of the LogicAsker framework, an automated system for evaluating and improving **logical reasoning** in **LLMs** using atomic logic rules.
  - Implemented **fine-tuning** procedures that significantly improved reasoning accuracy in LLMs.

- **Continual Learning Knowledge Graph Embeddings** CUHK
  Research Assistant, Supervisor: Prof. James Cheng *Jun 2022 - Aug 2022*
  - Developed **continual learning** techniques for dynamic **Knowledge Graph** embeddings using Elastic Weight Consolidation and edge replay sampling.
  - Achieved efficient incremental updates with minimal forgetting, adaptable to any embedding method, earning the **Best Project Award**.

- **APM: Efficient Approximate Graph Pattern Matching System** CUHK
  Research Assistant, Supervisor: Prof. James Cheng *May 2021 - Aug 2021*
  - Developed APM, a scalable **C++ system** for fast **approximate graph pattern matching** using **neighborhood sampling**.
  - Designed algorithms to support **general patterns** with **auto-optimized sampling strategies**, outperforming existing methods.

Publication

LogicAsker: Evaluating and Improving Logical Reasoning Ability of Large Language Models, Y Wan, W Wang, **Y Yang**, Y Yuan, et al., The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP 2024)

Selected Scholarships

- ELITE Stream Scholarship *(Top 15%)* — *Oct 2021, 2022, 2023, 2024*
- Scholarship for Academic Excellence *(Top 10%)* — *Jun 2022, 2023, 2024*
- Gold Award for Outstanding Academic Performance *(Top 2%)* — *May 2023, 2024*
- HKSAR Government Scholarship *(Top 1% in Hong Kong)* — *Nov 2023*
- Professor Charles K. Kao Research Exchange Scholarship *(Top 4%)* — *Jan 2023*

Extra-curricular Activities

- **Tencent AI Arena Multi-Agent Competition**
  CUHK Team Member, Advisor: Prof. Ho-fung Leung — *Mar 2022 - Jun 2022*
  - Designed and implemented a **multi-agent reinforcement learning** model for 3v3 battles in *Honor of Kings*, emphasizing agent cooperation and reward optimization.
  - Organized training strategies under resource constraints for competitive team evaluation.

- **International Collegiate Programming Contest**
  CUHK ICPC Team Member, Coach: Prof. Siu On Chan — *Oct 2020 - Oct 2023*
  - **Led** team and competed in regional contests, earning 4 **bronze medals** in Macau (2021), Kunming (2021), Shenyang (2022), Hong Kong (2022).
  - Specialized in solving algorithmic problems on **dynamic programming** and **graph theory**.

Skills

- **Programming Languages**: C/C++, Python, LaTeX
- **Languages**: Mandarin (Native), English (Fluent, TOEFL 105)
- **Skills**: Machine Learning, Reinforcement Learning, Competitive Programming, Algorithm, Large Language Model