



Yan SUN

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EDUCATION

National University of Singapore

Ph.D. in Information Systems and Analytics

Singapore

Aug 2023 – Current

The Chinese University of Hong Kong, Shenzhen

B.B.A. Financial Engineering with First-class Honor

Shenzhen, China

Sep 2019 – Jun 2023

PUBLISHED PAPERS

(Google Scholar)

- (1) **Yan Sun**, and Stanley Kok. “Unsupervised Multiple Kernel Learning for Graphs via Ordinality Preservation.” *International Conference on Learning Representations*. 2025.
- (2) **Yan Sun**, and Stanley Kok. “Investigating the Effects of Cognitive Biases in Prompts on Large Language Model Outputs.” *International Conference on Information Systems*. 2024.
- (3) **Yan Sun**, Jicong Fan. “MMD Graph Kernel: Effective Metric Learning for Graphs via Maximum Mean Discrepancy.” *International Conference on Learning Representations*. 2024. (**Spotlight: 5%**)
- (4) Yunhe Zhang, **Yan Sun**, Jinyu Cai, Jicong Fan. “Deep Graph-Level Orthogonal Hypersphere Compression for Anomaly Detection.” *International Conference on Learning Representations*. 2024. (**Spotlight: 5%**)
- (5) **Yan Sun**, Yi Han, Jicong Fan. “Laplacian-based Cluster-Contractive t-SNE for High Dimensional Data Visualization.” *ACM Transactions on Knowledge Discovery from Data*. 2023.

SELECTED AWARDS & ACHIEVEMENTS

Google PhD Fellowship 2024: Southeast Asia, Algorithm and Theory track.

Research Achievement Award: NUS School of Computing, AY2024-25.

Dean’s List (AY2019-20, AY2020-21, AY2021-22, AY2023-24): Recognized for outstanding academic performance.

Undergraduate Research Award (17th, 20th, 21st Round): Awarded to undergraduates with well-proposed research.

National 1st Prize in China Undergraduate Mathematical Contest in Modeling (CUMCM): Awarded to top-tier groups (rate: 292/49529=5.9%), Oct 2021. Our work was also awarded as spotlight paper (rate: 17/292=5.8%).

PROJECTS

Web Navigation with Large Models

School of Computing, NUS

via Model-based Rollouts and Rank-based Reward

Oct 2024- – Feb 2024

- This project explores the potential of using Visual/Language Models (V/LMs) as world models to optimize decision-making in complex web environments without directly interacting with live websites.
- The focus is on using language agents to generate action outcomes, with rewards from ranking the action candidates.
- The results achieve a 33.3% improvement over baselines in VisualWebArena and a 13.1% gain in Mind2Web-live.

Improving Large Language Models Reasoning

School of Computing, NUS

via Discriminator-Based Strategies and Feedback Mechanisms

Aug 2024- – Oct 2024

- This project explores methods to enhance Large Language Models (LLMs) in reasoning by improving the accuracy of discriminators that evaluate output tokens.
- The focus is on integrating discriminator-based semantic matching and execution feedback to refine LLM-generated outputs, improving decision-making in text-to-SQL (Spider, Bird) and mathematical reasoning (GSM8K) datasets.
- The results achieve improvements on Spider (+2.2%), Bird (+4.67%), and GSM8K (+12%) datasets.

PROFESSIONAL SERVICE

Reviewer: Neurips, ICLR, Neural Processing Letters

Teaching Assistant: BT4013, BT5151 @ NUS; ECO3121, ERG2050 @ CUHKSZ

SKILLS

Programming: Python, Linux, Git, SQL, C++; PyTorch, OpenRLHF, VeRL

Languages: Chinese, English, Cantonese, Korean