LI ZEKAI

HP: 96825558   Email: lizekai@u.nus.edu

EDUCATION

National University of Singapore   **Aug 2021 - Present**
Bachelor of Computing in Computer Science

- Artificial Intelligence Track.
- Double major in Mathematics.
- GPA: 4.77 / 5.0.
- Relevant course work: Programming Methodology, Algorithm and Data Structure, Introduction to Artificial Intelligence, Software Engineering, Computer Organization, Machine Learning, Natural Language Processing, and Computer Vision.

RESEARCH EXPERIENCE

Research Internship (remote), Carnegie Mellon University,   **Jun 2024 - Oct 2024**
Pittsburgh

- Advised by Professor Alexander G. Hauptmann and Dr. Zhi-qi Cheng on the topic of dataset distillation in the more complex scenario.
- Proposed to emphasize discriminative features in dataset distillation from data and supervision perspectives and constructed a new benchmark for future research.
- Achieved the SOTA performance on various benchmarks in the complex scenarios.

Research Internship (remote), University of Toronto, Toronto   **Mar 2024 - Jun 2024**

- Advised by Professor Konstantinos N. Plataniotis on the topic of dataset distillation.
- Proposed to prioritize information alignment in dataset distillation methods and achieved remarkable performance improvement on three well-known benchmarks.
- Submitted the paper to NeuIPS2024, received reviewer ratings 5, 5, 6.

Research Assistant (onsite), NUS HPC-AI Lab, Singapore   **Nov 2023 - Present**

- Supervised by Professor Yang YOU and Dr. Kai Wang on the topic of Efficient Machine Learning.
- Conducted research on improving the efficiency of machine learning from both dataset and model perspectives.

Undergraduate Researcher (onsite), NUS Web IR/NLP Group,   **May 2023 - Feb 2024**
Singapore

- Supervised by Professor KAN Min-Yen and Dr. Yanxia Qin on the factuality of LLMs.
- Implemented iterative automated question-answering feedback to enhance LLMs' factuality of scientific document summarization.
- Improved LLMs' factuality of abstractive summarization of Scientific Documents on two benchmarks.

Research Internship (remote), Chinese Academy of Sciences,   **Feb 2022 - Oct 2022**
Beijing

- Researched on enhancing the performance of multi-hop Question Answering.
- Decomposed multi-hop questions into sub-questions and built a self-adaptive reasoning framework on sub-questions.

WORK EXPERIENCE

Teaching Assistant, National University of Singapore, Singapore   Aug 2022 - Nov 2022
- Took charge of a 2-hour tutorial session of CS1101S Programming Methodology I; taught 7 freshmen with the foundation of programming.
- Spent 2 hours a week grading students' programming homework, gave feedback on students' mistakes, and provided guidance to reach the solution.

PUBLICATIONS

- Emphasizing Discriminative Features for Dataset Distillation in Complex Scenarios, arXiv (under review)
- Prioritize Alignment in Dataset Distillation, arXiv (under review).
- A Closer Look at Time Steps is Worthy of Triple Speed-Up for Diffusion Model Training, arXiv (under review)
- Self-Adaptive Reasoning on Sub-questions for Multi-hop Question Answering, ICASSP 2023.

AWARDS & CERTIFICATES

- School of Computing Dean' List Spring 2024, National University of Singapore, Singapore (June 2024)
- Outstanding Computing Project Prize, School of Computing, National University of Singapore (May 2024)
- School of Computing Certificate of Distinction in the Artificial Intelligence Focus Area (January 2024)
- School of Computing Dean' List Fall 2021, National University of Singapore, Singapore (January 2022)
- Huawei HCIP-AI EI Developer Certification (July 2021)