Jingsong Sun

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EDUCATION

Xi'an Jiaotong University (XJTU) **Xi'an, China**

Xi'an Jiaotong University Young Gifted Program, GPA:3.81, Ranking: 15/187 2022.9-2023.7

Bachelor's Degree in Artificial Intelligence, GPA: 92.10(4.0), Ranking: 2/72 (Currently a sophomore, secured a stable recommendation for postgraduate study because of Young Gifted Program) 2023.9-*Present*

RESEARCH EXPERIENCES

Exploring the Robustness of In-Context Learning with Noisy Labels 2024.1-2024.5

ICLR2024 workshop Accepted Second Author

Project Description: This project explores the robustness of Transformer models' In-Context Learning (ICL) capabilities when faced with noisy labels. The research shows that Transformers exhibit significant resilience against various types of noise in demonstration labels, and that **introducing noise into the training set** as a form of data augmentation can further enhance this robustness. This study provides valuable insights into understanding the **resilience of Transformers** and contributes to a broader understanding of their performance in natural language processing tasks.

Responsibilities: As a freshman student, I contributed to the entire paper and proposed the idea of studying the impact of input dimensions on Transformer performance in ICL. I independently conducted the experiments and wrote this section of the paper. ***The paper was accepted by the ICLR2024 Workshop.***

China University Robot Competition Championship 2022.9-*Present*

Linux, C++, Python Leader of Vision Group

Project Description: This project involves designing and deploying vision programs for robots in the Robocon University Championship. The vision program aims to predict the motion trajectory of objects, making decisions according to the on-field conditions. Tasks also include SLAM for the quadruped robot.

Responsibilities: As the leader of the Vision Group of Xi'an Jiaotong University's RC Team, I led the team to win the National First Prize in the China University Robot Competition. My responsibilities included:

Completing target detection using traditional vision and deep learning methods and implementing target tracking with YOLO, NMS and other algorithms. Debugging and developing ROS-based SLAM programs to achieve real-time mapping during navigation and obstacle avoidance for the quadruped robot.

Parallel Spiking Unit for SNN long sequential tasks 2022.9-2023.9

Linux, Python Remote Internship

Project Description: The main focus of the remote internship is to develop a novel framework for spiking neural networks (SNNs) that addresses long sequential tasks efficiently.

Responsibilities: During the initial phase of the project, I built foundational knowledge in machine learning and deep learning. I contributed to the mathematical derivations in the SNN-related paper, enhancing my skills in coding and scientific writing.

HONORS & AWARDS

- the second author to a paper presented at the ICLR 2024 Workshop 2024.5
- National Scholarship Candidate & HIWIN Elite Student Scholarship 2024.11
- 1st prize of China University Robot Competition 2023.7&2024.7
- Young Gifted Program Scholarship, Rank: 15/187 academic year 2022-2023
- 3rd prize in the national competition of the Blue Bridge Cup 2023.4