

Jingsong Shi

Preferred name: King-Siong Si

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Education

Xi'an Jiaotong University

Sept 2023 – Present

M.S. in Computer Science and Technology

- GPA: 3.78/4.00
- Advisor: Prof. [Weizhan Zhang](#)
- Selected courses: Stochastic Processes (91.45/100), Theory and Practice of Cryptography (98/100), Machine Learning (99/100), Theory and Application of Computer Networks (95.4/100)

Xi'an Jiaotong University

Sept 2019 – June 2023

B.E. in Computer Science and Technology (Honors Science Program)

- GPA: 4.00/4.30
- Advisor: Prof. [Weizhan Zhang](#)
- Selected courses: Mathematical Analysis for Engineering-I (100/100), Linear Algebra and Geometry (97/100), Mathematical Analysis for Engineering-II (99/100), Probability Theory and Stochastic Process (99/100), Combinatorial Mathematics (97/100), Numerical Analysis (98/100), Mathematical and Physical Equation (100/100), Data Structure and Algorithms (99/100), The Design and Analysis of Algorithms (97/100)

Publications (* indicates equal contribution)

- [1] **Accelerating Non-Maximum Suppression: A Graph Theory Perspective.**
 King-Siong Si*, Lu Sun*, Weizhan Zhang, Tieliang Gong, Jiahao Wang, Jiang Liu, and Hao Sun.
 In *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.

Selected Awards and Scholarships

Awards

- The 2024 ICPC China Shaanxi National Invitational Programming Contest, **Gold Medal** May 2024
- Outstanding Graduate of Xi'an Jiaotong University June 2023
- The 2022 China Collegiate Programming Contest (Mianyang Site), **Silver Medal** Nov 2022
- The 2022 ICPC Asia Shenyang Regional Contest, **Silver Medal** Nov 2022
- The 2022 China Collegiate Programming Contest (Guilin Site), **Silver Medal** Oct 2022
- The 2021 ICPC Asia Shenyang Regional Contest, **Silver Medal** Nov 2021
- National High School Mathematics League, **First Prize** Sept 2018
- China Southeast Mathematical Olympiad, **Silver Medal** July 2018
- National Olympiad in Informatics in Provinces, **First Prize** Nov 2017

Scholarships

- Outstanding Freshman Scholarship (Grade 1) Nov 2023
- Huawei Intelligent Base Scholarship Nov 2022
- Second Prize Scholarship of Xi'an Jiaotong University Nov 2022
- Servyou Scholarship (Grade 2), Qian Xuesen College Servyou Fund Nov 2021
- Second Prize Scholarship of Xi'an Jiaotong University Nov 2020

Experiences

Research Intern

Institute of Artificial Intelligence (TeleAI), China Telecom

*Beijing, China
Dec 2023 – Apr 2024*

- Analyzed the Non-Maximum Suppression (NMS) algorithm and proposed two optimization methods [1]. One method reduces the complexity from $O(n^2)$ to $O(n \log n)$, while the other significantly improves efficiency without affecting accuracy.

Software Engineer Intern

ByteDance

*Shenzhen, China
June 2022 – Aug 2022*

- Optimized the TikTok Open Platform code and encapsulated certain features to enhance user experience.

Projects

Chat Room: A Course Project for Computer Networks

- Overview:
 - This project is a multi-user chat room project that I developed as a teaching assistant for the computer networks course.
 - Students attending this course will learn network programming in this lab, focusing on using mutexes to address issues related to shared variables in multi-threaded concurrency. Finally, they will need to carefully implement a codec to resolve TCP packet sticking problems.
- Implemented several demos for testing and code for automated evaluation.
- Source code: <https://github.com/king-siong/chat-room>

NMS-Bench

- Overview:
 - NMS-Bench is a robust framework that allows researchers to evaluate various NMS methods over different models and datasets in a few minutes.
- Proposed and implemented the QSI-NMS (including eQSI-NMS) and BOE-NMS algorithms from [1].
- Reproduced COCO-style mAP metrics using C++.
- Source code: <https://github.com/Yuri3-xr/NMS-Bench>