Kangrui Chen

EDUCATION

Southern University of Science and Technology, China

Current GPA: 3.76/4.0

Undergraduate B.Eng. in Computer Science and Technology

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Michigan State University, US

04/2024 - 08/2024

09/2021 - Present

Intern Student Supervised by Jiliang Tang, Data Science and Engineering Lab

RELEVANT QUALIFICATION

Key Courses: Calculus, Linear Algebra, Introduction to Artificial Intelligence, Probability and Statistics, Data Structures and Algorithm Analysis, Discrete Mathematics, Algorithm Design and Analysis, Object Oriented Analysis Design, Artificial Intelligence, Machine Learning, Deep Learning

Honors:

The Third Class of the Merit Student Scholarship (x3: 2022, 2023, 2024) Second Prize of the Best Course Project Award (Machine Learning)

2023 Outstanding Student Teaching Assistant

2023 Outstanding Peer Mentor

2021 Admission Scholarship

Publication

1. Pengjie Shen, **Kangrui Chen**, Shulin He, Pengru Chen, Shuqi Yuan, He Kong, Xueliang Zhang, Zhong-Qiu Wang

Listen to Extract: Onset-Prompted Target Speaker Extraction

TASLP (In Submission)

2. Jie Ren, **Kangrui Chen**, Chen Chen, Vikash Sehwag, Yue Xing, Jiliang Tang, Lingjuan Lyu Self-Comparison for Dataset-Level Membership Inference in Large (Vision-)Language Model

WWW 2025 (Oral)

3. Jie Ren*, **Kangrui Chen***, Yingqian Cui, Shenglai Zeng, Hui Liu, Yue Xing, Jiliang Tang, Lingjuan Lyu Six-CD: Benchmarking Concept Removals for Benign Text-to-image Diffusion Models

CVPR 2025

RESEARCH EXPERIENCE & PROJECTS

LExt Advised by Zhong-Qiu Wang, SUSTech

09/2024 - 01/2025

- Proposed a highly-effective while extremely-simple algorithm for monaural target speaker extraction (TSE) by concatenating an enrollment utterance of the target speaker to the mixture signal at the waveform level.
- This simple approach produces strong TSE performance on multiple public datasets including WSJ0-2mix, WHAM! and WHAMR!

Self-Comparison for Dataset-Level MIA Advised by Jiliang Tang, MSU

08/2024 - 10/2024

- Proposed a dataset-level membership Inference Self-Comparison Membership Inference (SMI), which can be widely apply to (vision-)language model.
- Leveraging the memorization sensitivity of DNN, the proposed method outperformed traditional MIA and dataset inference techniques when no prior knowledge of ground-truth member data is available.

- Constructed a comprehensive dataset for benchmarking concept removal on text-to-image diffusion models.
- Proposed a novel metric named "in-prompt retainability", which measures model's ability to express the rest concepts when removals are triggered.

Improved Co-Tracker Advised by Feng Zhen, SUSTech

10/2023 - 01/2024

- Introduced a trick used by PIPs++ to improved long-term pixel-level point tracking ability.
- Proposed using optical flow as auxiliary guidance for co-track points selection.

Evox Advised by Ran Cheng, SUSTech

07/2023 - 08/2023

• Contributed to the implementation of multi-objective optimization algorithms for Evox, a distributed GPU-accelerated framework for scalable evolutionary computation.

Course Projects:

Blackboard Application with JavaScipt, Python, Vue3, and Electron

AI Chat Bot Platform with JavaScipt, Java, Python, and Hugging Face

Traffic Sign Recognizer using YOLOv8

Simplified Compiler on C99

HTTP Server on Python

CARP Solver using genetic algorithm

Reversi Player based on min-max search

Simple File System on Linux

Simplified Matrix Library on C++

Chess Game with GUI on Java

OTHER EXPERIENCE

Indie Game Full-Stack Audio Developer

Have been developing a UE5 3rd-person ACT game *Project: Seele* and undertaking Sound Design and Music Production, which won the Best Project award in NUS The 26th STePS.

Teaching Assistant

Assisted teaching in CS111 (Introduction to C Programming) and CS205 (C/C++ Program Design) by answering questions as well as designing quizzes, assignments, projects, and exams.

Student Development Center of Zhixin College

Served as a Peer Mentor, helping freshmen accommodate to campus life and study.

President of Astro Rave (Electronic Music Club in SUSTech)

Have been organizing and participating in performances and sharing relevant skills.

Social Practice Volunteer

Volunteered in college events, environmental protection activities, half marathon competition, and many others.

STANDARDIZED TEST

TOEFL iBT: 103 (R29, L30, S22, W22) *MyBest*: 104 (R29, L30, S23, W22)

SKILLS & INTERESTS

Languages: Chinese(native), English(fluent)

Programming: Python, C/C++, Java, Matlab, Markdown, LATEX, JavaScript

Utilities: Git, Hugging Face, Pytorch

Interests: (Electronic) Music (Production & DJing), Sound Design, Drink Mixing, RPG, Sports