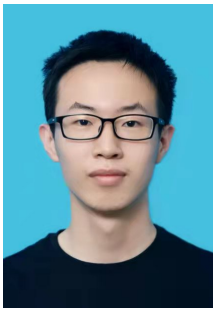
Ziheng Qin(秦子恒)



A CS undergraduate from Shandong University (China)

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Grades and rankings

- *GPA* 4.106 (ranking: 8.2%)
- *CET6* *563* *CET4* *609*

Award and scholarship

Award	Institution	Year
First class scholarship	Computer Science, Shandong University	2021
Merit student of Shandong University	Shandong University	2021
First Prize in National Mathematics Competition	Chinese Mathematical Society	2022

Paper under review(First author)

From July 2022, I have dived into the area of adversarial attack for three months with the guidance of professor Hu and cooperate with doctor Zhang in the research group. In November after extensive work, we submit the paper to a CCF-A Journal and I am listed as the first author. Currenly this paper is still under review. Expect good news! :)

Research Experience

1. *Work as a research assistant in Information Retrieval lab* **October 2021 - January 2022**

(Guide: Prof. Pengjie Ren) *SDU Information Retrieval lab*

- Learn about some knowledge in deep learning area, including Neural network, common programming framework(Pytorch and tensorflow). Participate in setting up an online website named 'AIzoo' which helps researcher build a Neural network easily.
- *Keywords: deep learning, pytorch, DNN, website*

2. *Work as a research assistant in HMIS Research Center* **February 2022 - June 2022**

(Guide: Prof. Dong Xuan (IEEE fellow)) *Human-Machine Intelligence Systems Research Center*

- Developed a motion robot to play table tennis which can serve as a training partner.
- *Keywords: robot, computer vision, MLP*

3. *Work as a research assistant in SDU IIC* **July 2022 - November 2022**

(Guide: Prof. Pengfei Hu) *SDU Institute of Intelligent Computing*

- We propose a novel physical UAP generation mechanism, which is input-agnostic, robust against over-the-air and independent sources. The attacker can fool ASR systems by jamming the victim's voice command by playing the imperceptible adversarial perturbations in hidden corners.
- We conduct extensive experiments to evaluate the performance of UAP noise through signal-to-noise ratio, attack distance, and angle between the speaker and noise generator. We also demonstrate the transferability of the UAP noise and give out the variation of attack success rate, MFCC, and model output confidence.
- *Keywords: audio adversarial attack, AI security*

Technical Skills

- Programming Language: C, C++, Python, Matlab
- Database System: Mysql
- Operating System: Windows, Linux
- Deep learning Framework: Pytorch(skillful), tensorflow
- Tools: Latex, Anaconda, Pycharm, Vscode

Personal Statement

I'm an undergraduate student from Shandong University.I have always been highly curious about problems in scientific research, and spare no effort finding ways to tackle them. I have served as the research associate for three top laboratories in SDU, include IR laboratory, HMIS Research Center, and Institute of Intelligence computing. During my time in Institute of Intelligence computing, I conduct extensive work and submit a paper to a CCF-A journal with the guidance of professor Hu. Currently the paper is still under review.

Meanwhile I have a solid mathematical foundation and excellent academic performance. I get outstanding grades in core courses such as machine learning, discrete mathematics, data structure and algorithm, advanced mathematics, linear algebra, probability and statistics etc. I won the first prize in in National Mathematics Competition for college students, First-class scholarship, Merit student of Shandong University.

I'll appreciate very much if you are willing to enroll me as your graduate student. Please contact me via zihengqin@sdu.edu.cn.