Tingxi Li

tinzzy.li@gmail.com | +8615807660063| homepage

EDUCATION

BSc. Applied Chemistry — Leicester, UK | Sept 2019
University of Leicester, First Class Honours Degree

BSc. Applied Chemistry — Dalian, CN | Sept 2019
Dalian University of Technology

Visiting Student in Computer Science — Munich, DE | Apr 2022
Technical University of Munich
Teacher Assistant (TA): Data Structure

WORK EXPERIENCE

TENCLASS | AI research intern — Shenzhen, CN | JAN 2022 - APR 2022

- Designed and implemented a virtual host on TikTok using a combination of text-to-speech and speech-to-video models. Collected and analyzed comments from live streaming, leveraging this data to train the model to provide appropriate responses.
- Constructed a private video dataset for the company and fine-tuned the models on this data to improve performance.

RESEARCH EXPERIENCE

ADVERSARIAL ROBUSTNESS OF ROBOTIC ARM — DEC 2022

- Developed a method to concatenate a physics engine and differentiable renderers, achieving perfect image reproduction for attacking both the Deep Q-Learning Network and the camera rendering process.
- Produced and evaluated adversarial examples based on shape and position changes, demonstrating understanding of the model's decision boundaries and features extracted by DQNs and the differentiable renderer.
- Perform adversarial attacks towards the model to make the robotic arm fail or takes more than one attempt to grasp.

ADVERSARIAL ROBUSTNESS OF VISION TRANSFORMER — AUG 2022

- The study found that ViT models exhibit higher vulnerability to adversarial attacks compared to CNN, and that the attention of the model is drawn to the perturbed patch.
- To mitigate this vulnerability, the study employed a combination of negative data augmentation and modification of the loss function.

SURVEY ON CREDIT CARD FRAUD DETECTION — JUNE 2021

- An analysis of popular financial fraud detection algorithms and put forward suggestions for improvement.
- Reproduce the results on various datasets. It is found that the current financial fraud detection models are dependent on the dataset, have high computational expenses, and are usually overfitted.

MISCELLANEOUS

Skills and Tools: Java, C++, Python, SQL, PyTorch, Tensorflow, PyBullet
Research Interests: Robust Machine Learning; AI for science
Languages: English / Mandarin / Cantonese / German