

Guanyan Ou

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Guanyan Ou is a fourth-year undergraduate student at Sun Yat-sen University. His research interest lies in trustworthy AI and privacy, with the overarching goal of making AI safe and fair.

Competences & Languages

AI & Data Analysis	Python, Pytorch; SQL; R language
App Development	Back-end: Java, Springboot; Front-end: React, JavaScript, Typescript; C#
Languages	Chinese — Native English — TOEFL: 105 (R-29, L-28, S-23, W-25) (Sep/09/2023)

Education

Expected Jul. 2024	School of Software Engineering, Sun Yat-sen University
Sep. 2020	Bachelor in Software Engineering, GPA: 3.8/4.0

Research & Publications

Paper on Adversarial Attacks on CV Classifiers

October 2022 – October 2023

Han Wu, **Guanyan Ou (Co-First Author)**, Weibin Wu, Zibin Zheng. “Improving Transferable Targeted Adversarial Attacks with Model Self-Enhancement.” *Under Review of the IEEE/CVF Conference on Computer Vision and Pattern Recognition. 2024.*

- Proposed a model-enhancement-based method, outperforming state-of-the-art baselines by 12.2%.
- Improved the success rates of targeted black-box adversarial attacks toward computer vision classifiers.
- Employed unstructured network pruning and sharpness-aware knowledge distillation to improve adversarial perturbation generation.

Patent for AI-assisted Tool

July 2022 – February 2023

Yuhong Nan, Zhaoxin Cai, **Guanyan Ou**, Zibin Zheng. “An Adversarial Method and Apparatus for Recognizing Misleading UI.” *Patent CN116149533A.* [Link]

- Developed an Android app to help users identify fake UI patterns, such as fake closing buttons.
- Protected users from being misled or triggering unexpected activities by blocking part of inputs.
- Identified real button by the accessibility of Android system comparing with results from computer vision model.

Ongoing Research on Red-teaming

August 2023 – Present

- Inducing black-box generative language models to produce harmful outputs.
- Using reinforcement learning framework and language models to generate human-comprehensible and natural prompts.

Projects & Experiences

Mentored Paper Review Experience

September 2023

- Learned paper review process by writing comments for 3 papers under the guidance of Prof. Weibin Wu.

RPCpico

June 2022 – July 2022

The course project of “Computer Network”

- Implemented a remote procedure call (RPC) program in Java, with HTTP protocol and Protobuf encoding.
- Provided load balance by a registration center, transferring request to the corresponding server.

Blog Project

November 2022 – January 2023

The course project of “Intermediate Training for Software Engineering”

- Developed a multi-user blog website comprising both the back-end and front-end for users, along with a separate front-end for the management interface.

Awards & Honors

SYSU Collegiate Programming Contest – Second Prize

2021 & 2022

- A university-wide programming contest.

SYSU Novice Collegiate Programming Contest – First Prize

2021

- A university-wide programming contest for students without experience in programming contests.