

WENDA CHU

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Shenzhen, Guangdong, China, 518067

EDUCATION

Tsinghua University, Beijing, China
Bachelor of Computer Science, Yao Class, IIS

September 2019 - Present

Overall GPA: 3.89

RESEARCH EXPERIENCE

Physical world attacks on object detection algorithms

Tsinghua University

Mentor: Xiaolin Hu

June 2021-present

- Attack object detection models by T-shirts textures that conceal people wearing them from the detection.
- Design a pipeline that attacks the three dimensional physical world in two dimensional digital space of textures.
- Texture datasets for fashionable T-shirts are collected. Generative methods are applied to generate smooth and fashionable textures that evade the detection.

SELECTED COURSE PROJECTS

1. Traffic at Peak Hours: A Game Theory View

- Models the unusual concentration of passengers on one direction of the subway during peak hours as a game.
- The existence of a Nash equilibrium was proved and an ϵ -approximate equilibrium was found by simulation.
- Analyzes the detouring actions of passengers that they travel in the reverse direction to assure getting on train.
- The result shows how excessive competition on limited resources such as transportation may cause a huge decrease on social welfare.

2. A Survey on Differential Privacy

- Surveys over differential privacy algorithms and their applications.
- Gains insights of the power of randomness towards provable security.

3. Diversifying Options in Option-Critic Framework of Hierarchical Reinforcement Learning

- Implement Option-Critic architecture and reproduce its result on maze problems
- Introduce intrinsic rewards to option level and enhance option specialization on termination probability.
- Our methods diversify the options in the higher level of hierarchical reinforcement learning.

SKILLS

Programming Skills: Python, PyTorch (proficient), C, C++, SQL, MATLAB, Verilog, \LaTeX .

Language Skills: Chinese(native), English(TOEFL 111: R30 L30 S24 W27).

GRE V159 Q169

HONORS AND AWARDS

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| • 2nd place in the 35th Chinese Physics Olympiad (CPhO) | 2018 |
| • Scholarship for Freshmen - Tsinghua University | 2019 |
| • Sports Excellence Award - Tsinghua University | 2020 |

SELECTED MAJOR COURSES

Artificial Intelligence: Principles and Techniques (A-, 4.0), Mathematics for Computer Science (A, 4.0), Mathematics for Artificial Intelligence (A-, 4.0), Game Theory (A+, 4.0), Introduction to Data Science (A, 4.0), etc.