YAO YIRAN

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Education

Shanghai Jiao Tong University Shanghai

B.E., School of Electronic Information and Electrical Engineering *Sep. 2018 – June 2022(Expected)*

- Total Score: 84.6/100, CS related: 91.6/100
- CS related course: Thinking and Approach of Programming, Fortran Programming and Scientific Computing, Randomicity and Complexity, Stochastic Simulation Methods and Its Applications, Probability and Statistics, Data Structure, Digital Electronics, Discrete Mathematics, Compiler Principles, Reinforcement Learning, Machine learning (AI), Deep Learning and Its Applications, Application of fuzzy Math, Computer Network

University of Virginia Remote visit

Summer Internship *Mar. 2021 – Now*

Language

TOEFL: R29+L30+S24+W28=111   **GRE**: V156+Q170+A4.0

Experience

On Symmetry Property in Adversarial Examples Sep. 2020 – Nov. 2020

with Prof. Ni *Shanghai Jiao Tong University*

- Discover an intriguing phenomenon called Symmetry Property in adversarial examples
- Design a novel loss function that constrain features to improve robustness
- Paper Submission to CVPR2021 as the third author
- Personal Contribution: Run most of the experiments, propose the final version of the loss function, and participate in paper writing

Identifying Influential Inputs in Probabilistic Logic Programming Aug. 2020 – Mar. 2021

with Prof. Zhou *Georgetown University*

- Propose a provenance-based approach towards identifying influential inputs in PLP programs
- Paper Submission to VLDB2021 as the fourth author
- Personal Contribution: Run most of experiments and propose the final version of loss function

Combination of adversarial learning and cost-sensitive learning Mar. 2021 – Now

with Prof. Evans *University of Virginia*

- Combine adversarial learning with cost-sensitive learning to defend targeted attack
- Hold a group meeting that sharing papers within the whole lab

Universal perturbations for GANs Jul. 2021 – Now

with Prof. Ni *Shanghai Jiao Tong University*

- Find universal perturbations that defend against arbitrary face manipulations with arbitrary GANs

Coding Projects

2048 Game | *Python, Jupyter Notebooks, TensorFlow, Keras* Mar. 2020 – June 2020
Atari & MuJoCo | *Python, Jupyter Notebooks, PyTorch, Keras* Mar. 2020 – June 2020
Context-Free Grammar Compiler | *C++, Visual Studio* Mar. 2020 – June 2020
Melody Generation | *Python, Jupyter Notebooks, TensorFlow, Keras* Sep. 2019 – Jan. 2020
Deep Learning Specialization | *Python, Jupyter Notebooks* Aug. 2019 – Oct. 2019
Game Theory | *C++, MATLAB, R* June 2019 – Aug. 2019

Awards

The Mathematical Contest in Modeling 2020 Feb. 2020

Be designated as Meritorious Winner *Problem Chosen – A*

The Mathematical Contest in Modeling 2019 Jan. 2019

Be designated as Successful Participant *Problem Chosen – A*