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# RESEARCH FOCUS

Deep Learning: Adversarial Machine Learning, Deep Model Compression, Computer Vision

### **EDUCATION**

| Ph.D. in CSE, Michigan State University          | Advisor: Sijia Liu | $\mathrm{Aug.}2022-\mathrm{Now}$ |
|--|--------------------|----------------------------------|
| <b>B.Eng.</b> in Automation, Tsinghua University | Rank: Top $20\%$   | Aug.2018-July.2022               |
| Chengdu Shude High School                        |                    | Aug.2015-July.2018               |
| Chengdu Jiaxiang Foreign Language School         |                    | Aug. 2012 – July. 2015           |

### WORKING EXPERIENCE

Research Intern in Tsinghua Statistical Artificial Intelligence & Learning Group, Beijing

Supervisor: Jun Zhu

June. 2021 – Dec. 2021

# **PUBLICATION**

- [1] A. Chen, Y. Yao, P. Chen, Y. Zhang, S. Liu, Understanding and Improving Visual Prompting: A Label-Mapping Perspective, CVPR'2023.
- [2] A. Chen\*, P. Lorenz\*, Y. Yao, P. Chen, S. Liu, Visual Prompting for Adversarial Robustness, *ICASSP* '2023.

### **PROJECT**

# Advancing Visual Prompt Technique

Supervisor: Sijia Liu (MSU) Collaborator: Pin-Yu Chen (IBM)

- Devise a novel iterative label mapping method for visual prompting which brings significant accuracy and interpretability improvements.
- Leverage visual prompting to improve test-time robustness.
- Explore connections between class-wise prompts and backdoor attack.
- Publication: [1, 2]

# Uncertainty Calibration for Image Classification

Supervisor: Jun Zhu (Tsinghua) Collaborator: Zhijie Deng (Tsinghua)

- Leverage model-based bayesian learning to improve calibration.
- Leverage augmentation-based methods to improve calibration.

### SKILL

• Excellent in Python, PyTorch for over 3 years; Familiar with C++, Git, Shell

## **HONOR**

- Entrepreneurship Excellence Award by Qingshan Capital, 2021.
- Academic Excellence Scholarship of Tsinghua University, 2019.
- Chinese University Entrance Exam Rank 0.01% of Sichuan Province, 2018.
- Chinese Chemistry Olympics 1st Prize of Sichuan Province, 2017.

# **SERVICE**

• Reviewers of ICML'22, KDD'22, ICASSP'22,