

YITAO XU

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EDUCATION

Ph.D. in Computer Science , EDIC, École Polytechnique Fédérale de Lausanne, EPFL	2023-Present
M.Sc. Computer Science , Exchange, École Polytechnique Fédérale de Lausanne, EPFL	2022-2023
M.Sc. Machine Learning , KTH Royal Institute of Technology	2021-2023
B.Eng. Computer Science , Beihang University	2016-2020

PUBLICATIONS

PUBLISHED

- **Yitao Xu**, Tong Zhang, and Sabine Süsstrunk. *AdaNCA: Neural Cellular Automata As Adaptors For More Robust Vision Transformer*. NeurIPS 2024.
- Ehsan Pajouheshgar*, **Yitao Xu***, Alexander Mordvintsev, et al. *Mesh Neural Cellular Automata*. SIGGRAPH, 2024.
- Ehsan Pajouheshgar, **Yitao Xu**, and Sabine Süsstrunk. *NoiseNCA: Noisy Seed Improves Spatio-Temporal Continuity of Neural Cellular Automata*. ALife 2024 (**Best Student Paper Award**).
- **Yitao Xu**, Ehsan Pajouheshgar, and Sabine Süsstrunk. *Emergent Dynamics in Neural Cellular Automata*. ALife 2024.
- Ehsan Pajouheshgar*, **Yitao Xu***, Tong Zhang, and Sabine Süsstrunk. *DyNCA: Real-time Dynamic Texture Synthesis Using Neural Cellular Automata*. CVPR, 2023.
- Tianlin Li, Aishan Liu, Xianglong Liu, **Yitao Xu**, et al. *Understanding Adversarial Robustness Via Critical Attacking Route*. Information Sciences, 2021.
- Aishan Liu, Tairan Huang, Xianglong Liu, **Yitao Xu**, et al. *Spatiotemporal Attacks For Embodied Agents*. ECCV, 2020.
- Chongzhi Zhang, Aishan Liu, Xianglong Liu, **Yitao Xu**, et al. *Interpreting and Improving Adversarial Robustness of Deep Neural Networks With Neuron Sensitivity*. IEEE Transactions on Image Processing, 2020.

PREPRINT

*: Equal contribution.

RESEARCH EXPERIENCE

-Research Intern, Image and Visual Representation Lab, EPFL 06.2022 - 09.2023

-Advisor: [Ehsan Pajouheshgar](#), [Prof. Sabine Süsstrunk](#)

Topic: Real-time Dynamic Texture Synthesis using Neural Cellular Automata

-Research Assistant, Tsinghua Laboratory of Brain and Intelligence, Tsinghua University

-Advisor: [Prof. Jia Liu](#)

11.2020 - 05.2021

Topic: Towards Machines Understanding Physics: Block Tower Stability Inference

-Research Intern, State Key Laboratory of Software Development Environment, Beihang University

-Advisor: [Prof. Xianglong Liu](#)

04.2019 - 05.2020

Topic 1: Interpreting Convolutional Neural Networks (CNN) with Neuron Sensitivity

Topic 2: Adversarial Attack against the Agent in Embodied Question Answering

Topic 3: Analysis and Rectification of Texture Bias in Convolutional Neural Networks

WORK EXPERIENCE

-Machine Learning Intern, DiDi AI Labs, DiDi Global Inc. 06.2020 - 11.2020

-Group Leader: *Dr. Zhengping Che, Prof. Jian Tang*

Project 1: Embedded Real-time UAV Pedestrian Detection

Project 2: 3D LiDAR Point Cloud Object Detection on nuScenes Dataset

HONOURS AND AWARDS

- Outstanding Undergraduate of Beihang University, 11.2019
- Outstanding Undergraduate of Beihang University, 11.2018
- Outstanding Undergraduate of Beihang University, 11.2017
- Scholarship for Academic Merit, Beihang University, 09.2016

TEACHING

-Department of Psychology, Tsinghua University

Course: Advances in Cognitive Science

02.2021 - 05.2021

- A 2-hour lecture on the development of Symbolism. [slides](#).