

Haotian Xue

Junior Student @ CS. SJTU

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EDUCATION

- **Shanghai Jiao Tong University** Shanghai, China
Bachelor of Science in Computer Science GPA: 88.8/100 Maths related: 91.4/100 *Sept. 2018 – June 2022 (Expected)*
I get almost all A or A+ in CS majoring courses.
- **Shanghai Jiao Tong University Zhiyuan Honor Class** Shanghai, China
Zhiyuan Honor class of Engineering(top 5%) *Sept. 2018 – June 2022 (Expected)*

RESEARCH EXPERIENCE

- **Massachusetts Institute of Technology, CSAIL** remote intern
Intuitive Physics, *Research Intern, tutored by Prof .Josh Tenenbaum* *Jul 2021 – Now*
 - Focus on improving generalization on visual intuitive physics. The key points of this work is 1. learn dynamics directly from rgb-images, 2. make the whole pipeline more generalized. (One first-author paper prepared for CVPR2022)
- **John Hopcroft Center for Computer Science** Shanghai, China
Natural Language Processing, *Research Intern, tutored by Prof .Zhouhan Lin* *May 2021 – Now*
 - Work on syntactically supervised Transformer structure to better cope with the long-text translation tasks and get a more interpretable attention weight. This is meaningful since the current Transformer structure is time consuming and the attention mechanism tends to be incomprehensible.
- **John Hopcroft Center for Computer Science** Shanghai, China
Explainable Artificial Intelligence , *Research Intern, tutored by Prof .Quanshi Zhang* *Jun 2019 – May 2021*
 - Work on proposing a set of criteria to evaluate the objectiveness of explanation methods of neural networks based on Shapley value in game theory.
 - Work on AI image augmentation based on DNN inference and shapley interaction.
 - Work on explaining for generalization problem in deep learning based on multi-player interaction in game theory.

INTERNSHIP

- **Microsoft Research Asia, Natural Language Computing Group** Beijing, China
Document Intelligence, *Research Intern, tutored by Dr .Lei Cui* *Sept 2021 – Dec 2021*
 - Work on large-scale pre-trained ViT-based model for document AI.

PAPER SUBMISSIONS/ONGOING

- Hao Zhang, **Haotian Xue**, Jiayi Chen and Quanshi Zhang, *Towards a Unified Evaluation of Explanation Methods without Ground Truth* (In submission)
- Xu Cheng*, Xin Wang*, **Haotian Xue**, Zhengyang Liang and Quanshi Zhang, *A Hypothesis for the Cognitive Difficulty of Images* (In submission to ICLR2022)
- Haotian Xue**, Yunzhu Li, Hsiao-Yu Tung, Antonio Torralba, Daniel LK Yamins, Joshua B. Tenenbaum, *A Compositional 3D Representations for Improving Generalization in Visual Intuitive Physics and Manipulation* (In prepration for CVPR2022)

AWARDS

- **Zhiyuan College Honors Scholarship (CN ¥15000, Top5%):**
- **Singapore Technologies Engineering Scholarship (CN ¥5000, Top 20%):**
- **Zhiyuan College Excellent Scholarship (Class C, CN ¥1000):**