

XIJIE HUANG

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EDUCATION

Shanghai Jiao Tong University

Sept 2016 - Anticipated in June 2020

Undergraduate, School of Electronics Information and Electrical Engineering

Overall GPA: 89.40/100 (3.82/4.3) Ranking: 2/55[\[certification\]](#)

Advisors: [Prof. Cewu Lu](#), Machine Vision and Intelligence Group, SJTU

[Prof. Manhua Liu](#), Department of Instrument Science and Engineering, SJTU

Highlighted Course: Linear Algebra(94), Discrete Mathematics(94.4), Probability and Statistics(94), Circuit Theory(93) Electronic System Design(100), Introduction to Engineering(100), AI Algorithm and Practices(98), Digital Signal Processing(96.2), Robotics Foundation(95), Computer Aided Design of Circuit(98), Theory of Error and Data Processing(99)

University of California, Los Angeles

June 2019 - Sept 2019

CSST (Cross-disciplinary Scholars in Science & Technology) Program

GPA: 4.0/4.0 (Total Enrolled Units: 12.0, All A⁺)

Advisors: [Prof. Mani B. Srivastava](#), Department of ECE & CS, University of California, Los Angeles

TECHNICAL STRENGTHS

Languages Python, MATLAB, C, C++, Java, HTML

Framework TensorFlow, Keras, Caffe, PyTorch

RESEARCH INTERESTS

My research interests lie in the general area of machine learning, particularly in deep learning, security and privacy, applications in computer vision and internet of things. More concretely, My research interests focus on human-object interaction (HOI) recognition and backdoor adversarial attack of DNNs.

RESEARCH/PROJECT EXPERIENCE

IIoT Research Center, Department of Electrical Engineering

June 2017 - Sept 2017

Undergraduate Research Assistance

- Analyzed the information of social network to build connection profiles of users
- Optimized *jieba* word segmentation framework to improve its accuracy and efficiency

Machine Vision and Intelligence Group

Sept 2017 - Present

Undergraduate Research Assistance

- Proposed [Transferable Interactiveness Network](#) to tackle the imbalance in distribution in human-object interaction recognition problem. Our method outperforms the previous state-of-the-art methods by 2.38, 3.06, and 2.17 mAP on three Default category sets on HICO-DET, 4.0 and 3.4 mAP on V-COCO
- Built the state-of-the-art dataset of human-object interaction **HAKE** [\[Website\]](#). HAKE provides elaborate and abundant body part state labels for human instances in a large scale of images and videos.
- One [paper](#) has been accepted in CVPR2019, one [paper](#) uploaded on arxiv (co-author)

Fingerprint Group, Department of Instrument Engineering

Feb 2019 - Present

Undergraduate Research Assistance

- Designed Generative Adversarial Network to enhance latent fingerprint images
- Optimized the fingerprint recognition algorithm based on enhanced results

- Designed an algorithm to detect whether a neural network has been compromised by malware that causes the model to produce incorrect results when the input includes special triggers for the backdoor.
- Proposed **NeuronInspect**, using visual interpretability technique to effectively detect trojan backdoors in deep neural network without restoring the trigger and any backdoor samples.
- One paper in submission (first-author)

PUBLICATIONS [\[MY GOOGLE SCHOLAR\]](#)

Transferable Interactiveness Knowledge for Human-Object Interaction Detection

Yonglu Li, Siyuan Zhou, **Xijie Huang**, Liang Xu, Ze Ma, Haoshu Fang, Cewu Lu

CVPR2019

PREPRINT [\[MY GOOGLE SCHOLAR\]](#)

HAKE: Human Activity Knowledge Engine

Yong-Lu Li, Liang Xu, Xinpeng Liu, **Xijie Huang**, Ze Ma, Hao-Shu Fang, Cewu Lu In submission

NeuronInspect: Detecting Trojan Backdoors in Deep Neural Networks via Visual Interpretability

Xijie Huang, Moustafa Alzantot, Mani.B.Srivastava

In submission

ACADEMIC ACHIEVEMENTS

National Scholarship (Top 2% students) [certificate] , Ministry of Education of P.R.China.	2017
A Class Scholarship (Top 2% students), Shanghai Jiao Tong University.	2017
Endress+Hauser Scholarship, Endress+Hauser Inc.	2018
B Class Scholarship (Top 10% students), Shanghai Jiao Tong University.	2018
Second Prize in China Undergraduate Mathematical Contest in Modeling, Shanghai Division.	2017
Meritorious Winner in MCM & ICM, Comap.	2018
First Prize in TIDY UP MY ROOM CHALLENGE — ICRA 2018 (Member of Kaibot Team)	2018
CSST Scholarship (USD \$5,343) [letter] University of California, Los Angeles	2019
Best Presentation Award [certificate] (UCLA-CSST)	2019

STANDARD TEST

TOEFL	100 (Reading:27 Listening:27 Speaking:23 Writing:23)
GRE	320 (Q170+V150) + 3.5(AW)