XIJIE HUANG

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EDUCATION

Shanghai Jiao Tong University *Sept 2016 - Present*
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), Circuit Theory(93) Electronic System Design(100), Introduction to Engineering(100), Introduction to Electronics(91), Probability and Statistics(94), AI Algorithm and Practices(98), Digital Signal Processing(96.2), Robotics Foundation(95), Computer Aideed 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)
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, application 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 connections profile of users
- Optimized *jieba* word segmentation framework to improve its accuracy and efficiency

Machine Vision and Intelligence Group *Sept 2017 - Present*
Undergraduate Research Assistance

- Researched in computer vision & robotic, particularly in human-object interaction detection.
- Proposed Transferable Interactiveness Network to tackle the imbalance in distribution in human-object interaction problem. Our method outperforms the 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

· Optimized the fingerprint recognition algorithm based on enhanced results

Networked Embedded Systems Laboratory (NESL), UCLA *June 2019 - Present*
Undergraduate Research Assistance

· Designed an algorithm to detect whether a nerual 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 has been uploaded on arxiv (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 arxiv Preprint*

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 Mathematical Contest In Modeling & Interdisciplinary Contest In Modeling, 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)