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
Miscellaneous	LaTeX, Altium Designer, Proteus, LabVIEW

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

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

· 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)

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

· 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)

Fingerprint Group, Department of Instrument Engineering   *Feb 2019 - Present*
Undergraduate Research Assistant

· Designed Generative Adversarial Network to denoise and enhance latent fingerprint images
· Optimized the fingerprint segmentation, feature extraction and recognition algorithm based on enhanced results. Achieve state-of-the-art matching accuracy on NIST-27 dataset.

IIoT Research Center, Department of Electrical Engineering   *June 2017 - Sept 2017*
Undergraduate Research Assistant

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

PUBLICATIONS

Transferable Interactiveness Knowledge for Human-Object Interaction Detection
*Yonglu Li, Siyuan Zhou, **Xijie Huang**, Liang Xu, Ze Ma, Haoshu Fang, Cewu Lu*   *CVPR2019*

PREPRINT

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
Second Prize in China Undergraduate Mathematical Contest in Modeling, Shanghai Division.	2017
Endress+Hauser Scholarship, Endress+Hauser Inc.	2018
B Class Scholarship (Top 10% students), Shanghai Jiao Tong University.	2018
Meritorious Winner [certificate] in MCM & ICM, Comap.	2018
First Prize in TIDY UP MY ROOM CHALLENGE at 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
RongChang Academic Scholarship (Highest honor in my school, Top 20 of 16000 students)	2019
A Class Oversea Research Fellowship	2019

STANDARD TEST

TOEFL	105 (Reading:28 Listening:30 Speaking:24 Writing:23)
GRE	322 (Q170+V152) + 3.5(AW)