Xieyang Liu

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EDUCATION

University of Michigan, Ann Arbor, MI — Sept 2015 - Apr 2017
- *B.S.E.* in Computer Science Engineering — GPA: 3.93/4.00

Shanghai Jiao Tong University (SJTU), Shanghai, China — Sept 2013 - Aug 2015
- *B.S.E.* in Electrical and Computer Engineering — GPA: 3.81/4.00

Relevant Courses: Data Structures and Algorithms, Machine Learning, Database Management Systems, Operating System, Web Databases & Information Systems

Honors and Awards: 2015 Mathematical Contest in Modeling-COMAP Meritorious Winner (Sophomore year), Tang Jun-Yuan SJTU Scholarship (Top 2), Scholarship for Outstanding Academic Performance, Dean's List

PROJECTS

Learning to Boosting Super-class Classifier Performances Using Sub-class information (AAAI '17)
Research Assistant — Jul 2016 - Present
- Work to investigate the impact of subclass information on the performances of traditional machine learning classifiers.
- Develop a worker-friendly adaptive web-based image labeling toolkit for fast image labeling to gather superclass and subclass information.

Computer Vision and Crowdsourcing for Vehicle Crash Analysis (CHI '17)
Research Assistant — Mar 2016 - Aug 2016
- Develop a reconfigurable, web-based vehicle crash scene annotation UI that enable crowd workers to efficiently and effectively provide non-trivial information about the scene such as object labels and measurements.
- Construct an annotation server backend (reusable with future experimental front-end UIs) that helps recruit crowd workers for real-time and synchronous tasks, collect their responses, and visualize the data collection.
- Devise systematic ways to boost worker performance and improve system reliability through iterations of Amazon MTurk experiments.

Learning to Detect Human-Object Interactions (HOI) Using "Humans Interacting with Common Objects" (HICO) Benchmark (ECCV '16)
Research Assistant — Oct 2015 - Apr 2016
- Develop an Amazon MTurk-based image annotation toolkit as well as its corresponding automated evaluation systems that boost worker-end annotating efficiency and facilitate large-scale image data extractions.
- Implement and revise a Python-based back-end interface using Amazon provided APIs that supports instant data collection and progress check.
- Contribute to the development of a novel DNN-based framework for HOI detection called Human-Object Region-based Convolutional Neural Networks (HO- RCNN) that significantly improves the performance of HOI detection by exploiting human-object spatial relations, and achieves state of the art performance.

LEADERSHIP/WORK EXPERIENCE

Undergraduate Researcher advised by Dr. Walter Lasecki — Apr 2016 - Present
Crowds and Machines Lab @ University of Michigan
- Contribute extensively to crowd-powered interdisciplinary projects that address novel and promising research questions.

Research Assistant advised by Dr. Jia Deng — Oct 2015 - Present
Artificial Intelligence Lab @ University of Michigan
- Work on a CV-based project to boost the performance of HOI detection by exploiting human-object spatial relations.

Research Assistant & Programmer supervised by Dr. Charles Woolley — Apr 2016 - Present
Center for Ergonomics @ University of Michigan, College of Engineering
- Work with a software engineering team to develop and maintain the commercially available 3D Static Strength Prediction Program (3D SSPP)

Instructional Aide for **Database Management Systems** supervised by Dr. Atul Prakash — Sept 2016 - Dec 2016
Center for Research on Learning and Teaching in Engineering @ University of Michigan
- Prepare and lead weekly discussion sessions and office hours that facilitate students' learning process.
- Communicate and cooperate extensively with other faculty members to improve the teaching quality of the class and the students' overall performance.

SKILLS

Programming Languages & Libraries: C/C++, Java, Python, JavaScript, CSS, HTML5, SQL, jQuery, Bootstrap
Software & Platforms: MATLAB, Git, Visual Studio, Amazon Mechanical Turk, LaTeX