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: 3.92/4.00

Shanghai Jiao Tong University (SJTU), Shanghai, China — Sept 2013 - Sept 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
Undergraduate Researcher — Jul 2016 - Present
- Investigated the impact of added subclass information on the performances of traditional machine learning classifiers.
- Built an efficient web-based image labeling tool for gathering superclass and subclass information from crowds.

Computer Vision and Crowdsourcing for Vehicle Crash Analysis
Undergraduate Researcher — May 2016 - Sept 2016
- Developed a reconfigurable, web-based vehicle crash scene annotation UI that enables crowd workers to efficiently and effectively provide a visual scene, such as object labels and measurements.
- Constructed a reusable annotation server backend that recruits crowd workers for real-time tasks, collects responses, and visualizes the collected data.
- Iteratively designed ways to boost worker performance and improve system reliability on Amazon MTurk.

Learning to Detect Human-Object Interactions (HOI) Using "Humans Interacting with Common Objects" (HICO) Benchmark (CVPR '17 - In Submission)
Research Assistant — Oct 2015 - Apr 2016
- Developed 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.
- Implemented and revised a Python-based back-end interface using Amazon provided APIs that supports instant data collection and progress check.
- Contributed 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
- Worked on crowd-powered interdisciplinary projects that address novel and promising research questions.

Research Assistant advised by Dr. Jia Deng — Oct 2015 - Present
Vision and Learning Lab @ University of Michigan
- Worked on a CV-based tool that boosts performance on 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
- Worked 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
- Prepared and led weekly discussion sessions and office hours that facilitate students' learning process.
- Communicated and worked extensively with faculty members to improve the teaching quality of the class and the students' overall performance.

Teaching Assistant for **Multivariate Calculus** supervised by Dr. Jing Liu — May 2015 - Aug 2015
Center for Learning and Teaching @ UM-SJTU Joint Institute

SKILLS

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