Xieyang Liu

1851 Lake Lila Lane, Apt C5, Ann Arbor, MI 48105 | 734-741-3585 | lxieyang@umich.edu

EDUCATION

- **University of Michigan**, Ann Arbor, MI — Sept 2015 ~ May 2017
  - *B.S.E.* in Computer Science Engineering (Dual Degree Program)
- **Shanghai Jiao Tong University**, Shanghai, China — Sept 2013 ~ Aug 2015
  - *B.S.E.* in Electrical and Computer Engineering

  Relevant Courses: Data Structures and Algorithms, Computer Architectures, Machine Learning (Taking), Database Management Systems (Taking)

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

PROJECTS

- **Visual Recognition of Human-Object Interactions (HOI) using "Humans Interacting with Common Objects" (HICO) Benchmark** *Research Assistant* — Oct 2015 ~ Present
  - Develop an *Amazon MTurk*-based image annotation toolkit as well as its corresponding automated evaluation systems that boosts worker-end annotating efficiency and facilitates **large-scale image data extraction**.
  - Construct a well-rounded **HICO** dataset that contains 47,774 images with 600 human-object interaction categories.
  - Apply machine learning techniques to help computers understand the human actions as well as locates human and objects in newly-encountered images (Expected to finish in Mar 2016).
- **Smart Belt for the Elders & Health Management System** *Technical Consultant* — Mar 2015 ~ Present
  - Build a smart wearable device mounted on belts as well as its corresponding smart phone application that **automatically** detects fall-overs of the elders and calls for help from doctors, hospitals, and families.
  - Add popular functionalities like heart-rate monitoring to make the device more capable and competitive in market.
  - Develop a health platform for the elders that keeps track of their movement and health status in the hope of improving living qualities of the elders and boosting medical treatment development in China (On-going).
- **Portable Laser Guitar** *Project Leader & Software Engineer* — May 2014 ~ Sept 2014
  - Designed and build a brand-new type of guitar with its strings being laser beams, its body being an electronic speaker, and its fret-board being retractable.
  - Developed controlling algorithms and programs based on **Arduino microcontroller** for the laser guitar that helps detects players' finger-styles and make the correct chord tune via the speaker.
  - Reduced the size of a guitar by 50% and limit the maximum latency between a string played and making the correct tune to 0.1s, where human beings are not able to detect.

LEADERSHIP/WORK EXPERIENCE

- **Research Assistant** advised by Yu-Wei Chao (PhD) and Dr. Jia Deng — Oct 2015 ~ Present
  Artificial Intelligence Lab @ University of Michigan
  - Design various HTML templates and JavaScript files to implement the image annotation toolkit based on web.
  - Develop the automatic evaluation system for image annotation evaluation and image data extraction in MATLAB.
  - Design and implement machine learning algorithms to help computer understand human actions and locate human/object positions in future images (On-going).
  - Attend weekly group meetings, discuss and tackle technical problems during research and development (On-going).
- **Teaching Assistant for Applied Calculus** supervised by Dr. Jing Liu — May 2015 ~ Aug 2015
  Center for Learning and Teaching (CLT @ UM-SJTU JI)
  - Prepared and lead weekly recitation sessions and office hours that review the lecture contents as well as cultivate students' problem-solving skills.
  - Graded homework assignments and exams, reflect common problems and concerns to the faculty supervisor.

SKILLS

- **Programming Languages:** C/C++, Java, JavaScript, HTML5, MATLAB script, Python
- **Software and Platforms:** Visual Studio, MATLAB, Amazon Mechanical Turk, Git, Photoshop, LaTeX, Xilinx ISE
- **Languages:** English, Mandarin Chinese