Xiao Hu

Email: hu440@purdue.edu
Phone: (1)832-276-2101
Webiste: https://xiaohu.info

Address: 345 S Chauncey Ave Apt 1,
West Lafayette, 47906 IN

OBJECTIVE

A self-motivated M.S. student at Purdue University Electrical and Computer Engineering Department looking for an internship in 2021 Summer.

RESEARCH INTERESTS

Human-computer interaction, human computation and crowdsourcing, data visualization and analysis, full-stack web development, applied artificial intelligence and computer vision.

EDUCATION

Purdue University, West Lafayette — May, 2020
B.S. in Computer Science, minor in Mathematics

Purdue University, West Lafayette — May, 2022
M.S. in Electrical and Computer Engineering

TECHNICAL SKILLS

Programming languages: Python, C++, C, Java, JavaScript, HTML, CSS, R, D3.
Database: MySQL, PostgreSQL
Tools/Framework: Django, Jekyll, Tableau.
Familiar: MatLab, Assembly language.
Languages: Chinese(native), English(fluent), Spanish(beginner).

PUBLICATIONS

1. [Published] **Xiao Hu**, Haobo Wang, Somesh Dube, Anirudh Vegesana, Kaiwen Yu, Yung-Hsiang Lu, Ming Yin. "Discovering Biases in Image Datasets with the Crowd". In *the 7th AAAI Conference on Human Computation and Crowdsourcing (HCOMP)*, Skamania Lodge, WA, October 2019. PDF
2. [Published] **Xiao Hu**, Haobo Wang, Anirudh Vegesana, Gore Kao, Somesh Dube,Kaiwen Yu, Shuo-han Chen, Yung-Hsiang Lu, Ming Yin. "Crowdsourcing Detection of Sampling Biases in Image Datasets". In *Proc. The Web Conference (WWW)*, Taipei, Taiwan, April 2020. PDF
3. [Published] Sergei Alyamkin, ... **Xiao Hu**, ... George K. Thiruvathukal, and Yung-Hsiang Lu. "Low-Power Computer Vision: Status, Challenges, and Opportunities". In *IEEE Journal on emerging and selected topics in circuits and systems*, Vol. 9, No. 2, June 2019. PDF
4. [Accepted] Sangpil Kim, Hyung-gun Chi, **Xiao Hu**, Karthik Ramani. "A Large-scale Mechanical Components Benchmark for Deep Neural Networks". In *the European conference on computer vision (ECCV)*, online, August 2020.
5. [Accepted] Sangpil Kim, Hyung-gun Chi, **Xiao Hu**, Anirudh Vegesana, Karthik Ramani. "First-Person View Hand Segmentation of Multi-Modal Hand Activity Video Dataset". In *The British Machine Vision Association (BMVC)*, online, September 2020.

EXPERIENCE

Purdue CAM2 Research Group — **May 2018 - Present**
Undergraduate Research Assistant — *West Lafayette, IN*

- **WebUI Team Leader** — Oct 2018 - Dec 2018
  - Led the team to maintaine the CAM2 official website: cam2project.net
  - Updated the CSS with Bootstrap 4, improved the user interfaces and theme for all pages.
  - Built the new website with GitHub Pages and Jekyll at purduehelps.org
- **Crowdsourcing Team Leader** — Jan 2019 - Present
  - Lead the team to develop a Crowdsoucing workflow that can detect and report image dataset biases.

- Developed a web application with Django as the framework, Heroku as the server, Amazon S3 as the database. The experiments are conducted on Amazon Mechanical Turk (AMT). Build a quality control server hosted on GCloud that is used to filter the inputs from the crowd workers.
- Lead the paper: Discovering Biases in Image Datasets with the Crowd, 2019 HCOMP. (*Publication 1*). Lead the paper: Crowdsourcing Detection of Sampling Biases in Image Datasets, 2020 WWW. (*Publication 2*)

- **Drone Video Team Leader** Oct 2019 - Present
  - Create drone-captured videos and build evaluation system for 2020 Low Power Computer Vision Competition (LPCVC) UAV Video Track and 2021 LPCVC Drone Video Track. Tasks included:
    1. Optical Character Recognition (OCR).
    2. Multi-object Detection and Tracking.
    3. Semantic Segmentation.
  - Drones used: Hubsan Zino Pro, DJI Mavic Mini, DJI Mavic Air.

Purdue C-Design Lab **Aug 2018 - Present**
Undergraduate Research Assistant *West Lafayette, IN*

- Work with a PhD student and a master student to collect, build, evaluate a mechanical component benchmark (MCB). Website: mechanical-components.com.
- Publications:
  (a) A Large-scale Mechanical Components Benchmark for Deep Neural Networks, 2020 ECCV. (*Publication 3*)
  (b) First-Person View Hand Segmentation of Multi-Modal Hand Activity Video, 2020 BMVC. (*Publication 4*)

Low Power Computer Vision Competition **Nov 2018 - Current**
Manager *West Lafayette, IN*

- Introduction: Objective for this competition is to identify the best vision solutions that can simultaneously achieve high accuracy in computer vision and energy efficiency.
- Contribution: Build and maintain the submission website: lpcv.ai.
- Publication: "Low-Power Computer Vision: Status, Challenges, and Opportunities" (*Publication 5*).

INTERNSHIP

SUBU LLC. **May 2018 - Aug 2019**
West Lafayette, IN

- Create, write, and test a web application hair cut appointment platform software using React & Redux. Deploy the software on cloud and ensure software can scale.
- The web framework is Redux and React. The website is hosted on the Gcloud sever with MySQL database.

TEACHING ASSISTANT

CS 183 **Aug 2018 - Dec 2018**
West Lafayette, IN

- Introduce new Computer Science students to various programming tools which will aid them in their Computer Science classes, personal projects, and software development job experiences

ECE 264 **Aug 2019 - Dec 2019**
West Lafayette, IN

- Introduction to C Programming.

RELEVANT COURSES

• Problem Solving And Object-Oriented Programming • Programming In C
• Foundations Of Computer Science • Systems Programming • Computer Architecture
• Data Structures And Algorithms • Data Mining And Machine Learning
• Introduction To The Analysis Of Algorithms • Compilers: Principles And Practice
• Introduction to Artificial Intelligence • Intro To Data Visualization • Compilers
• Human Centered Computation

ADDITIONAL ACTIVITIES

• Member of **Purdue Convolution Volunteer Network** **Aug 2016 - Sep 2018**
• Member of **Purdue Varsity Glee Club** **Fall 2018**
• Director of **Purdue Global China Connection** **Jan 2018 - Present**