Yu-Wei Chao

Contact University of Michigan (734) 730-7701 Information Computer Science and Engineering ywchao@umich.edu 2260 Hayward Street http://www.umich.edu/~ywchao/ Ann Arbor, MI 48109-2121 Computer vision, machine learning, object/human action recognition, 3D scene understanding Research Interests **EDUCATION** University of Michigan, Ann Arbor, MI Sept 2013 - present Ph.D. in Computer Science and Engineering Advisor: Prof. Jia Deng University of Michigan, Ann Arbor, MI Sept 2011 – Apr 2013 M.S. in Electrical Engineering: Systems Advisor: Prof. Silvio Savarese National Chiao Tung University, Hsinchu, Taiwan Sept 2005 – June 2009 B.S. in Electronics Engineering Minor in Applied Mathematics Fall 2008 Carnegie Mellon University, Pittsburgh, PA International Exchange Program Work Google Research, Los Angeles, CA June 2017 - Sept 2017 EXPERIENCE Software Engineering Intern • Human action detection in videos • Host: Sudheendra Vijayanarasimhan Adobe Research, San Jose, CA June 2016 - May 2017 Computer Vision Research Intern • Human pose forecasting • Mentors: Jimei Yang, Brian Price, Scott Cohen University of Michigan, Ann Arbor, MI Sep 2014 – present Graduate Student Research Assistant (GSRA) • Visual recognition of human-object interactions • Advisor: Prof. Jia Deng **DAQRI**, Mountain View, CA May 2014 – Aug 2014 Research Intern • 3D scene understanding for augmented reality • Mentors: Chris Broaddus, Wenyi Zhao, Byungsoo Kim Stanford University, Stanford, CA July 2013 – Dec 2013 Visiting Student Researcher • 3D layout estimation of indoor scenes • Human group activity recognition • Advisor: Prof. Silvio Savarese Academia Sinica, Taipei, Taiwan Aug 2010 - July 2011 Research Assistant • Image classification via sparse representation • Supervised dictionary learning for sparse representation • Mentor: Dr. Yu-Chiang Frank Wang Conference Learning to Detect Human-Object Interactions **Publications** Winter Conference on Applications of Computer Vision (WACV) 2018 Yu-Wei Chao, Yunfan Liu, Xieyang Liu, Huayi Zeng, Jia Deng

Forecasting Human Dynamics from Static Images

Computer Vision and Pattern Recognition (CVPR) 2017

Yu-Wei Chao, Jimei Yang, Brian Price, Scott Cohen, Jia Deng

HICO: A Benchmark for Recognizing Human-Object Interactions in Images

International Conference on Computer Vision (ICCV) 2015

Yu-Wei Chao, Zhan Wang, Yugeng He, Jiaxuan Wang, Jia Deng

Mining Semantic Affordances of Visual Object Categories

Computer Vision and Pattern Recognition (CVPR) 2015

Yu-Wei Chao, Zhan Wang, Rada Mihalcea, Jia Deng

Discovering Groups of People in Images

European Conference on Computer Vision (ECCV) 2014

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Layout Estimation of Highly Cluttered Indoor Scenes using Geometric and Semantic Cues

International Conference on Image Analysis and Processing (ICIAP) 2013 (Oral, 7.9% acceptance rate) Yu-Wei Chao, Wongun Choi, Caroline Pantofaru, Silvio Savarese

Understanding Indoor Scenes using 3D Geometric Phrases

Computer Vision and Pattern Recognition (CVPR) 2013 (Oral, 3.2% acceptance rate)

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Semantic Structure From Motion with Points, Regions, and Objects

Computer Vision and Pattern Recognitio (CVPR) 2012

Sid Ying-Ze Bao, Mohit Bagra, Yu-Wei Chao, Silvio Savarese.

Locality-constrained Group Sparse Representation for Robust Face Recognition

International Conference on Image Processing (ICIP) 2011

Yu-Wei Chao, Yi-Ren Yeh, Yu-Wen Chen, Yuh-Jye Lee, Yu-Chiang Frank Wang

JOURNAL **Publications**

Indoor Scene Understanding with Geometric and Semantic Contexts

International Journal of Computer Vision (IJCV) 2015

Wongun Choi, Yu-Wei Chao, Caroline Pantofaru, Silvio Savarese

Locality-Sensitive Dictionary Learning for Sparse Representation Based Classification

Pattern Recognition 2013

Chia-Po Wei, Yu-Wei Chao, Yi-Ren Yeh, Yu-Chiang Frank Wang

Teaching EXPERIENCE

Computer Vision (EECS 542), University of Michigan

Graduate Student Instructor (GSI)

Computer Vision (EECS 442), University of Michigan

Fall 2012

Fall 2014

Graduate Student Instructor (GSI)

- Served as the only GSI for a class with 80+ student
- Taught weekly section on topics from class; demonstrated off-the-shelf softwares
- Managed an online forum for discussions; held office hours to provide individualized help

Study Abroad Scholarship for Outstanding College Students, Ministry of Education, Taiwan Fall 2008

AWARDS AND Honors

Adobe Travel Grant

July 2017

Google Ph.D. Fellowship

2016 - present

Qualcomm Innovation Fellowship Finalist

March 2015, July 2017

Rackham Conference Travel Grant, University of Michigan

Government Scholarships for Study Abroad (GSSA), Ministry of Education, Taiwan

May 2011

April 2016

Academic Achievement Award, National Chiao Tung University

Spring 2008

Professional Service

Reviewer

- Computer Vision and Pattern Recognition (CVPR), 2016, 2017
- \bullet International Conference on Computer Vision (ICCV), 2017
- European Conference on Computer Vision (ECCV), 2016
- International Conference on Intelligent Robots and Systems (IROS), 2016

Student Volunteer

• IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2013

OTHER ACHIEVEMENTS

Contributor to open source projects

• Caffe: a popular tool for Deep Learning

Technology Transfer - Industrial Technology Research Institutes, Hsinchu, Taiwan

Dec 2011

• Sparse Representation Based Face Recognition Technology

SKILLS AND LANGUAGES

Programming Languages: Python, C/C++, UNIX shell scripting, MATLAB, JavaScript, and others

Libraries: TensorFlow, Torch, Caffe, OpenCV

Operating Systems: Linux, Windows and Mac OS X Languages: English, Chinese (Mandarin), and Taiwanese