Yu-Wei Chao

Contact Information

University of Michigan
Computer Science and Engineering
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Research Interests

Computer vision, machine learning, object/human action recognition, 3D scene understanding

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

Carnegie Mellon University, Pittsburgh, PA — Fall 2008
International Exchange Program

Work Experience

Adobe Research, San Jose, CA — June 2016 – present
Computer Vision Research Intern
- 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
- Advisors: 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 Publications

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 — Fall 2014
Graduate Student Instructor (GSI)

Computer Vision (EECS 442), University of Michigan — Fall 2012
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

Awards and Honors

Google Ph.D. Fellowship	2016 – present
Qualcomm Innovation Fellowship Finalist	April 2016
Rackham Conference Travel Grant, University of Michigan	March 2015
Government Scholarships for Study Abroad (GSSA), Ministry of Education, Taiwan	May 2011
Study Abroad Scholarship for Outstanding College Students, Ministry of Education, Taiwan	Fall 2008
Academic Achievement Award, National Chiao Tung University	Spring 2008

Professional Service

Reviewer
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2016
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016
- International IEEE Workshop on 3D Representation and Recognition (3dRR-13), 2013

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: MATLAB, Python, C/C++, UNIX shell scripting, JavaScript, and others
Libraries: Caffe, Torch, OpenCV
Operating Systems: Linux, Windows and Mac OS X
Languages: English, Chinese (Mandarin), and Taiwanese