Yu-Chuan Su

http://www.cs.utexas.edu/~ycsu
ycsu@cs.utexas.edu

RESEARCH INTERESTS

- Computer Vision — semantic understanding, mobile vision, 360°/omni-directional/VR vision, object detection, video analysis, event recognition, active vision, video summarization
- Machine Learning — deep learning, multi-modality learning, scalable learning algorithm, convolutional neural network on graph, spectral domain neural network
- Data Mining — user intention understanding, event discovery

EDUCATION

The University of Texas at Austin August 2014 - Present
Ph.D. in Computer Science

· Advisor: Prof. Kristen Grauman
· Thesis: Learning for 360° Video Compression, Recognition, and Display
· GPA: 3.92 (0∼4 scale)

National Taiwan University September 2012 - June 2014
M.S. in Computer Science

· Advisor: Prof. Winston H. Hsu
· Thesis: Large Scale Mobile Visual Recognition
· GPA: 4.27 (0∼4.3 scale)

National Taiwan University September 2006 - June 2011
B.S. in Computer Science and Physics

· GPA: 91.11 (0∼100 scale)

AWARDS AND FELLOWSHIPS

- **Google PhD Fellowship 2017**
- **Best Application Paper Award, ACCV 2016**
- **Best Thesis Award, Chinese Image Processing and Pattern Recognition Society 2015**
- **Calhoun Graduate Excellence Fellowship**
- **KDD Cup 2013**
  - Author-Paper Identification Challenge (Track 1) – **1st place** (in 561 teams)
  - Author Disambiguation Challenge (Track 2) – **1st place** (in 241 teams)
- **College Student Research Training Fellowship**
  - Fellowship for B.S. research from National Science Council, Taiwan
- **Academic Achievement Award, National Taiwan University**
  - President's Award 4 times (top 5% academic performance in semester)
  - Dean's Award (top 10% academic performance at graduation)

SELECTED PUBLICATIONS

- Yu-Chuan Su, Kristen Grauman
  Kernel Transformer Networks for Compact Spherical Convolution
  Conference on Computer Vision and Pattern Recognition (CVPR) 2019

- Yu-Chuan Su, Kristen Grauman
  Learning Compressible 360° Video Isomers
  Conference on Computer Vision and Pattern Recognition (CVPR) 2018

- Yu-Chuan Su, Kristen Grauman
  Learning Spherical Convolution for Fast Features from 360° Imagery
  Advances in Neural Information Processing Systems (NIPS) 2017

- Yu-Chuan Su, Kristen Grauman
  Making 360° Video Watchable in 2D: Learning Videography for Click Free Viewing
  Conference on Computer Vision and Pattern Recognition (CVPR) 2017 (Spotlight)

- Yu-Chuan Su, Dinesh Jayaraman, Kristen Grauman
  Pano2Vid: Automatic Cinematography for Watching 360° Videos
  Asian Conference on Computer Vision (ACCV) 2016 (Oral, Best Application Award)

- Yu-Chuan Su, Kristen Grauman
  Detecting Engagement in Egocentric Video
  European Conference on Computer Vision (ECCV) 2016 (Oral)

- Yu-Chuan Su, Kristen Grauman
  Leaving Some Stones Unturned: Dynamic Feature Prioritization for Activity Detection in Streaming Video
  European Conference on Computer Vision (ECCV) 2016

- Yu-Chuan Su, Tzu-Hsuan Chiu, Yin-Hsi Kuo, Chun-Yen Yeh, Winston H. Hsu
  Scalable Mobile Visual Classification by Kernel Preserving Projection over High-Dimensional Features
  IEEE Transactions on Multimedia 2014

- Yu-Chuan Su, Tzu-Hsuan Chiu, Yan-Ying Chen, Chun-Yen Yeh, Winston H. Hsu
  Enabling Low Bitrate Mobile Visual Recognition – A Performance versus Bandwidth Evaluation
  ACM Multimedia 2013 (Oral)

- Yu-Chuan Su, Tzu-Hsuan Chiu, Guan-Long Wu, Chun-Yen Yeh, Felix Wu, Winston H. Hsu
  Flickr-tag Prediction using Multi-modal Fusion and Meta Information
  ACM Multimedia 2013 (Grand Challenge)

- Chen-Wei Tsai, Yu-Chuan Su, Guan-De Li, Jeng-Da Chai
  Assessment of Density Functionals with Correct Asymptotic Behavior
  Physical Chemistry Chemical Physics 2013

- Yu-Chuan Su, Guan-Long Wu, Tzu-Hsuan Chiu, Winston H. Hsu
  Evaluating Gaussian Like Image Representation Over Local Features
  International Conference on Multimedia and Expo (ICME) 2012

- Guan-Long Wu, Yu-Chuan Su, Tzu-Hsuan Chiu, Winston H. Hsu
  Scalable Mobile Video Question-Answering System with Locally Aggregated Descriptors and Random Projection
  ACM Multimedia 2011 (Grand Challenge)

RESEARCH EXPERIENCE

With Prof. Kristen Grauman August 2014 - Present
Graduate Research Asssistant *Computer Science Department, UT Austin*

- Research in computer vision and machine learning
- Attention analysis in ego-centric video
- Feature triage in streaming activity detection
- Vision in 360° videos

With Prof. Winston H. Hsu July 2012 - June 2014
Masters Student *Computer Science Department, NTU*

- Research in multimedia analysis and machine learning
- Mobile-friendly visual recognition
- Deep learning for video event detection using transfer learning

With Prof. Winston H. Hsu July 2010 - August 2011
Undergraduate Researcher *Computer Science Department, NTU*

- Research in multimedia analysis and retrieval
- Video question answering and event detection on mobile devices
- Investigate the properties of gaussian like image representations

With Prof. Jeng-Da Chai August 2009 - August 2011
Undergraduate Researcher *Physics Department, NTU*

- Research in Density Functional Theory and Time Dependent Density Functional Theory
- Develop new long-range corrected functionals using laplacian correction
- Study the properties of different long-range correction schemes
- Implement LB94 model potential on Q-Chem 4.0

PROFESSIONAL ACTIVITIES

Invited Talks

- Learning for 360 Compression and Convolution, National Tsing Hua University, January 2018
- Graduate Seminar, National Taiwan University, December 2017
- 6th Workshop on Intelligent Cinematography and Editing, Lyon, April 2017
- Vision and Learning Meet-Up: Recent Advances and Experience Sharing from Overseas Taiwanese Scholars, Academia Sinica, January 2017

Organizing Committee

- ICCV Workshop on 360 Perception and Interaction, 2019
  Webpage: https://360pi.github.io/iccv19
- ECCV Workshop on 360 Perception and Interaction, 2018
  Webpage: https://360pi.github.io/eccv18

Journal Reviewer

- Data Mining and Knowledge Discovery (DAMI)
- IEEE Transactions on Multimedia (TMM)
- IEEE Transactions on Visualization and Computer Graphics (TVCG)
- Computer Vision and Image Understanding (CVIU)
- IEEE Transactions on Graphics (TOG)

· International Journal of Computer Vision (IJCV)
· IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
· IEEE Transactions on Image Processing (TIP)

Program Committee / Reviewer

· WACV 2017, UIST 2017, SIGGGRAPH Asia 2017, WACV 2018, CVPR 2018, SIGGRAPH Asia 2018, EPIC 2018, NIPS 2018, ACCV 2018, CVPR 2019, ICML 2019, TVX 2019, ICCV 2019, NeurIPS 2019

WORK EXPERIENCE

Google May 2018 - August 2018
Software Engineer Intern

· Work on unsupervised video understanding

Yahoo! July 2013 - August 2013
Technical Intern

· Work on Yahoo! knowledge graph project with Yahoo! search team