

# ZHONGZHENG (JASON) REN

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## Research Interest

My research interests lie in Computer Vision and Machine Learning. Specifically, they are: (1) Learning visual knowledge with minimal human supervision. (2) Leveraging synthetic data to help real-world vision tasks. (3) Privacy preserving computer vision technology.

## EDUCATION

2018 - 2021 University of Illinois at Urbana-Champaign (UIUC)

*Ph.D*

- Major: Computer Science
- Advisor: Prof. Alexander Schwing

2015 - 2017 University of California, Davis (UCD)

*M.Sc.*

- Major: Computer Science
- Thesis: Multi-task Feature Learning using Synthetic Game Imagery.
- Thesis Committee: Prof. Yong Jae Lee (advisor), Prof. Kuan-liu Ma, Prof. Cho-Jui Hsieh

2011 - 2015 Sun Yat-sen University (SYSU)

*B.Eng.*

- Major: Software Engineering
- Thesis: Clothes Co-Parsing via weakly supervised Image Segmentation and Labeling.

## PUBLICATIONS

*ECCV 18*

Learning to Anonymize Faces for Privacy Preserving Action Detection.  
**Zhongzheng Ren**, Yong Jae Lee, Michael S. Ryoo.  
European Conference on Computer Vision (ECCV), 2018.

*CVPR 18*

Cross-Domain Self-supervised Multi-task Feature Learning using Synthetic Imagery.  
**Zhongzheng Ren**, Yong Jae Lee.  
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018.

*WACV 17*

Who Moved My Cheese? Automatic Annotation of Rodent Behaviors with Convolutional Neural Networks.  
**Zhongzheng Ren**, Adriana Noronha, Annie Vogel Ciernia, Yong Jae Lee.  
IEEE Winter Conference on Application of Computer Vision (WACV), 2017.

## WORKING EXPERIENCE

2018.5-2018.8 Research Intern

*NVIDIA Research*

- Learning and Perception Research (LPR) group
  - Mentors: Dr. Zhiding Yu, Dr. Ming-Yu Liu, Dr. Xiaodong Yang, and Dr. Jan Kautz
- Working on weakly supervised recognition.

2017.9-2018.5 Machine Learning Researcher

*EgoVid*

- Supervisor: Prof. Michael S. Ryoo
- Worked on recognizing human actions from privacy-preserved videos. An anonymizer is learned to modify human faces, while minimizing the bad effect on action detection performance. (ECCV'18)

2017.9-2018.5 Visiting Scholar

*UCD*

- Supervisor: Prof. Yong Jae Lee
- We designed a self-supervised visual representation learning algorithm using synthetic imagery in a multi-task setting that also adapts its features to real-world images, which achieved STOA results on transfer learning benchmarks (CVPR'18).

2016.4-2017.9 Graduate Student Researcher

*UCD*

- Advisor: Prof. Yong Jae Lee
- Worked on Automatic Rodent behaviors Annotation. We introduced deep learning based classification methods to replace classical tracking approaches and released a program to save

human annotation labor in neuro-science experiments (WACV'17).

*2014.9-2015.5*      **Undergraduate Student Researcher**  
**SYSU**      Participated in the Human Clothes Parsing project. I mainly worked on speeding up the program and removing human supervision by leveraging human detector and human pose. We released the dataset containing 2098 street fashion photos with pixel level annotations.

## INVITED TALKS

[Slides available on my website.]

*July 2018*      Cross-Domain Self-supervised Multi-task Feature Learning using Synthetic Imagery.  
 leiphone.com, China.

## LIVE DEMOS

*ECCV 18*      Activity-Preserving Face Anonymization for Privacy Protection.  
**Zhongzheng Ren**, Yong Jae Lee, Hyun Jong Yang, and Michael S. Ryoo.

## TEACHING EXPERIENCE

*Teaching Assistant*      ECS 174 Computer Vision, Spring Qtr. 2017, UC Davis

## COMPUTER SKILLS

*OS*      Linux, Mac OS, Windows  
*Tools*      Caffe(2), (Py-)Torch, TensorFlow, OpenCV, LIBSVM  
*Languages*      Python, Lua, Matlab, C/C++, Shell, HTML,  $\LaTeX$   
*Game Engines*      Blender, UnrealEngine 4

## SELECTED AWARDS & HONORS

2018 · Travel Grant, CV-COPS 2018  
 2017 · AWS Education Research Grant (\$15000), Amazon  
 2017 · Graduate Student Travel Award, UC Davis  
 2016 · Graduate Group in Computer Science (GGCS) travel award, UC Davis  
 2015 · Excellent Undergraduate Thesis, Software School, SYSU  
 2012, 2013 · Second Prize University Scholarship, SYSU