

# (JACOB) ZHIYUAN FANG

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## EDUCATION

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**Ph.D. Candidate** *2017 - Expected Spring, 2022*  
**Arizona State University, USA** 4.0/4.0  
*Computer Science, Ira A. Fulton Schools of Engineering*

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**Bachelor of Engineering** *2013 - 2017*  
**Southern University of Science and Technology, CN** 3.6/4.0  
*Department of Computer Science and Engineering*

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## RESEARCH KEYWORDS

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- *Computer Vision and Natural Language Processing;*
- *Vision and Language Pre-training and Knowledge Distillation*
- *VL tasks: Image/Video Captioning, Retrieval, VQA, and Grounding.*

## PREVIOUS EXPERIENCES

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**Research Intern@ Microsoft Cloud & AI, Redmond**  
*Jan, 2021. - Sep, 2021* *VL Pre-training, Knowledge Distillation*  
*Collaborators: Jianfeng Wang, Zhe Gan, Lijuan Wang, Zicheng Liu*  
· Vision and Language Model Pre-training, Compression via Knowledge Distillation, etc.

**Research Intern@ Microsoft Research, Redmond**  
*May, 2020. - Sep, 2020* *Self-supervised Representation Learning*  
*Collaborators: Lei Zhang, Lijuan Wang, Zicheng Liu*  
· Self-supervised Representation Learning & Knowledge Distillation on large scale visual data.

**Visiting Student@ MMLab of Chinese Academy of Sciences**  
*Sep 2016 - Feb 2017* *Face Recognition, Yu Qiao, Zhifeng Li*  
· Deep face recognition; Contrastive loss design.

**Visiting Student@ University of California, Irvine**  
*June 2016 - Sep 2016* *Deep learning, Biomedical Image processing, Pierre Baldi*  
· Bio-Medical image processing; Object segmentation and detection.

## SELECTED PUBLICATIONS & PRE-PRINTS

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\*: equal contribution

1. “*Compression Visual-linguistic Model via Knowledge Distillation.*”  
**Zhiyuan Fang**, Jianfeng Wang, Xiaowei Hu, Lijuan Wang, Yezhou Yang, Zicheng Liu.  
(arXiv preprint arXiv:2104.02096) (under review)
2. “*SEED: Self-Supervised Distillation for Visual Representation.*”  
**Zhiyuan Fang**, Jianfeng Wang, Lijuan Wang, Lei Zhang, Yezhou Yang, Zicheng Liu,  
(International Conference on Representation Learning (ICLR), May, 2021)

3. “*Video2commonsense (v2c): Learning to transform video scenes to commonsense knowledge.*”  
**Zhiyuan Fang**, Tejas Gokhale, Chitta Baral, and Yezhou Yang,  
(*Empirical Methods in Natural Language Processing (EMNLP)*, Long Paper, 2020)
4. “*ViTAA: Visual-Textual Attributes Alignment in Person Search by Natural Language.*”  
Zhe Wang\*, **Zhiyuan Fang\***, Jun Wang and Y Yang,  
(*European Conference on Computer Vision (ECCV)*, 2020)
5. “*Modularized Textual Grounding for Counterfactual Resilience.*”  
**Zhiyuan Fang**, Shu Kong, Charless Fowlkes, Yezhou Yang,  
(*Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019)
6. “*Weakly Supervised Attention Learning for Textual Phrases Grounding.*”  
**Zhiyuan Fang**, Shu Kong, Tianshu Yu, Yezhou Yang,  
(*CVPR Vision and Language Workshop, 2018*)
7. “*Range Loss for Deep Face Recognition with Long-tail.*”  
Xiao Zhang, **Zhiyuan Fang**, Yandong Wen, Zhifeng Li, Qiao Yu,  
(*International Conference on Computer Vision (ICCV)*, 2017)
8. “*A Multi-resolution Analysis Approach for Spinal Metastasis Detection using Siamese Neural Network.*”  
Juan Wang, **Zhiyuan Fang**, Ning Lang, Huishu Yuan, Lydia Su, Pierre Baldi,  
(*Computers in Biology and Medicine, 2017*)(Honor Paper, 5%)

## TEACHING ASSOCIATIVE:

*FIN 330: Data Mining and Data Analysis*  
*CSE 205: Object Oriented Programming*  
*CSE 310: Data Structure and Algorithm*  
*CSE 571: Artificial Intelligence*

*SUSTech, 2017 Spring*  
*ASU, 2017 Fall, 2018 Spring*  
*ASU, 2017 Fall, 2018 Fall*  
*Coursera-ASU, 2019 Spring*

## AWARDS

*Outstanding Reviewer*  
*Fulton Engineering Graduate Fellowship*  
*Honor Paper Award (5%)*

*British Machine and Vision Conference, 2019*  
*Ira Fulton School of Engineering, 2019*  
*Computers in Biology and Medicine, 2018*

## ACADEMIC SERVICES

**Journal reviewer:** *TIP, IEEE; Patter Recognition, Elsevier; TCSVT, IEEE*  
**Conference Committee:** *Neurips, CVPR, ICCV, ECCV, AAAI, ICLR, BMVC, ICRA, etc.*

## REFEREES

**Yezhou Yang** (Ph.D. Advisor)  
 Associate Professor, Arizona State University  
**Email:** yz.yang@asu.edu

**Shu Kong**  
 Postdoc Researcher, Carnegie Mellon University  
**Email:** shuk@andrew.cmu.edu

**Tianshu Yu**  
 Assistant Professor, Chinese University of Hong Kong  
**Email:** tianshuy@asu.edu