

# ARKA SADHU

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University of Southern California, Los Angeles, CA, 90089

## EDUCATION

- PhD Computer Science** University of Southern California, Los Angeles, CA, USA 2018-Present  
• **Advisor: Prof. Ram Nevatia** • **CGPA: 4.0/4.0**  
• **Annenberg Fellow 2018-22**
- Bachelor of Electrical Engineering** Indian Institute of Technology Bombay, India 2014-2018  
• **Honors in Electrical and Minor in Computer Science** • **CGPA: 9.44/10**

## PEER-REVIEWED PUBLICATIONS

- Video Question Answering with Phrases via Semantic Roles [[Paper](#)]  
**Arka Sadhu**, Kan Chen, Ram Nevatia  
**Under Review**
- Visually Grounded Continual Learning of Compositional Phrases [[Paper](#)]  
Xisen Jin, Junyi Du, **Arka Sadhu**, Ram Nevatia, Xiang Ren  
**EMNLP 2020** arxiv:2005.00785 [cs.CL]
- Video Object Grounding using Semantic Roles in Language Description [[Paper](#)] [[Code](#)]  
**Arka Sadhu**, Kan Chen, Ram Nevatia  
**CVPR 2020** arXiv:2003.10606 [cs.CV]
- Zero-Shot Grounding of Objects from Natural Language Queries. [[Paper](#)] [[Code](#)]  
**Arka Sadhu**, Kan Chen, Ram Nevatia  
**ICCV 2019 (Oral)** arXiv:1908.07129 [cs.CV]

## ACADEMIC EXPERIENCES

**Reviewer: WACV'20,21, ICPR'20, BMVC'20** (Outstanding Reviewer), **AAAI'21**  
**Keynote Speaker: Workshop on Media Forensics (CVPR'19)**  
**Workshop Organizer: Workshop on Synthetic Realities Audio Visual Fakes (ICML'19)**  
**TA: Advanced Computer Vision (CSCI 677) Fall'19**

## INTERNSHIP

- **Allen Institute for Artificial Intelligence (AI2), Seattle** (May'20 - Aug'20)  
Research Intern with Mark Yatskar, Tanmay Gupta, and Aniruddha Kembhavi  
*Project: Recognizing Situations in Video*
- **Wadhvani Institute of AI, Mumbai, India** (May'18 - Aug'18)  
Research Intern with Prof. Subhasis Chaudhuri and Rahul Panicker  
*Project: Automatic grading of ZN Stained Tuberculosis Sputum Microscopy Images*
- **University of Southern California, Los Angeles, CA, USA** (May'17-July'17)  
Research Intern with Prof. Ram Nevatia  
*Project: MediaForensics to find spoofed donor image*
- **Aalto University, Espoo, Finland** (May'16-July'16)  
Research Intern with Prof. Juho Kannala  
*Project: Robust Loop Closures for modeling 3D indoor environments*

## NOTABLE PROJECTS

- **Awesome-Grounding** [[Github](#)]: Curated list of papers on grounding language in vision.
- **Visual Commonsense using BERT in Pytorch** [[Github](#)]: improved BERT baselines on VCR dataset.
- **Inference Networks for SPENs** [[Report](#)] [[Github](#)]: Tensorflow implementation of ICLR'18 paper Learning Approximate Inference Networks for Structured Prediction.
- **Voice Conversion Using GANs** [[Report](#)] [[Github](#)]: Tensorflow implementation of Interspeech'17 paper with additional sentence encoding scheme.

## ACADEMIC AND TECHNICAL ACHIEVEMENTS

- Awarded Annenberg grant for presenting in Annenberg Symposium.
- Placed 3rd at the IFood Challenge which was a part of the [FGVC5](#) at CVPR 2018. [[Code](#)]
- Awarded Annenberg Graduate Fellowship at University of Southern California, 2018.
- Awarded Viterbi-India Scholarship to pursue research at Viterbi School of Engineering (summer'17)
- Awarded Aalto Research Assistant fellowship to pursue research at Aalto University (summer'16)
- Secured All India Rank 134 in JEE Advance 2014 among 1.5 lakh selected candidates.
- Received the Best Idea Award for our project on Virtual Reality at the Tech and RnD Expo 2015.

## SKILLS

- **Programming Languages:** Proficient in: C++, Python, Matlab, Bash, Embedded-C, Assembly
- **Deep Learning Frameworks:** Pytorch, Tensorflow, Caffe.
- **Computer Vision Frameworks:** OpenCV, Scikit-Image, Scikit-Learn
- **NLP Frameworks:** Spacy, StanfordCoreNLP