# Ankan Bansal

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# CURRENT RESEARCH INTERESTS

Multi-modal Learning, Scene Understanding, Vision and Language

#### EDUCATION

University of Maryland, College Park, MD, USA

August 2015 - present

July 2010 - June 2015

Degree: Ph.D., Electrical and Computer Engineering

Advisor: Rama Chellappa

Indian Institute of Technology, Kanpur, India

Degree: B.Tech. and M.Tech., Electrical Engineering

#### SELECTED PUBLICATIONS

#### Visual Question Answering on Image Sets

Ankan Bansal, Yuting Zhang, Rama Chellappa

Under Submission

#### Spatial Priming for Detecting Human-Object Interactions

Ankan Bansal, Sai Saketh Rambhatla, Abhinav Shrivastava, Rama Chellappa

Under Submission

# Removing Shortcuts and Resolving Scale Mismatch for Jigsaw

Shlok Mishra, Anshul Shah, Ankan Bansal, Abhishek Sharma, Abhinav Shrivastava, David Jacobs Under Submission

# Rethinking Object Detectors for Human Object Interaction Detection

Sai Saketh Rambhatla, Ankan Bansal, Abhinav Shrivastava, Rama Chellappa

Under Submission

#### How are attributes expressed in face DCNNs?

Prithviraj Dhar, Ankan Bansal, Carlos D. Castillo, Joshua Gleason, P. Jonathon Phillips, Rama Chellappa IEEE International Conference on Automatic Face & Gesture Recognition (FG), 2020, arXiv:1910.05657

#### Detecting Human-Object Interactions via Functional Generalization

Ankan Bansal, Sai Saketh Rambhatla, Abhinav Shrivastava, Rama Chellappa

Thirty-Fourth AAAI Conference on Artificial Intelligence, 2020, arXiv:1904.03181

# A Fast and Accurate System for Face Detection, Identification, and Verification

Rajeev Ranjan, *Ankan Bansal*, Jingxiao Zheng, Hongyu Xu, Joshua Gleason, Boyu Lu, Anirudh Nanduri, Jun-Cheng Chen, Carlos D. Castillo, Rama Chellappa

IEEE Transactions on Biometrics, Behavior, and Identity Science (T-BIOM), 2019, arXiv:1809.07586

#### **Zero-Shot Object Detection**

Ankan Bansal, Karan Sikka, Gaurav Sharma, Rama Chellappa, Ajay Divakaran

European Conference on Computer Vision (ECCV), 2018, link

## Deep Features for Recognizing Disguised Faces in the Wild

Ankan Bansal, Rajeev Ranjan, Carlos D. Castillo, Rama Chellappa

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2018, link

#### Predicting Dynamical Evolution of Human Activities from a Single Image

Suhas Lohit, Ankan Bansal, Nitesh Schroff, Jaishanker Pillai, Pavan Turaga, Rama Chellappa IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2018, link

#### Proximity-Aware Hierarchical Clustering of Unconstrained Faces

Wei-An Lin, Jun-Cheng Chen, Rajeev Ranjan, Ankan Bansal, Swami Sankaranarayanan, Carlos D. Castillo, Rama Chellappa

Image and Vision Computing (IVC), 2018

## Deep Learning for Understanding Faces

Rajeev Ranjan, Swami Sankaranarayanan, Ankan Bansal, Navaneeth Bodla, Jun-Cheng Chen, Vishal M. Patel, Carlos D. Castillo, Rama Chellappa

IEEE Signal Processing Magazine, 2017, link

#### The Do's and Don'ts for CNN-based Face Verification

Ankan Bansal, Carlos Castillo, Rajeev Ranjan, Rama Chellappa

International Conference on Computer Vision (ICCV) Workshops, 2017, arXiv:1705.07426

## UMDFaces: An Annotated Face Dataset for Training Deep Networks

Ankan Bansal, Anirudh Nanduri, Carlos Castillo, Rajeev Ranjan, Rama Chellappa International Joint Conference on Biometrics (IJCB), 2017, arXiv:1611.01484

# People Counting in High Density Crowds from Still Images

Ankan Bansal, K. S. Venkatesh

International Journal of Computer and Electrical Engineering, 2015 Vol. 7(5), arXiv:1507.08445

#### INTERNSHIPS

Salesforce Einstein AI, Palo Alto, USA

Advisors: Nikhil Naik, Richard Socher Amazon AWS AI, Pasadena, USA

Advisors: Yuting Zhang, Vijay Mahadevan, Stefano Soatto

Amazon AWS Deep Learning, Seattle, USA

Advisors: Joaquin Zepeda, Avinash Ravichandran, Stefano Soatto

SRI International, Princeton, USA

Advisor: Ajay Divakaran

Topic: Grounding Visual Concepts

May 2019 - August 2019

Topic: Visual Question Answering

May 2018 - August 2018

Topic: Semi-supervised Learning

May 2017 - August 2017
Topic: Zero-shot Learning

#### MASTERS THESIS

**Topic:** Estimating Number of People in Very High Density Crowds

Supervisor: K. S. Venkatesh

#### HONORS AND AWARDS

- Jacob K. Goldhaber Travel Grant, University of Maryland, 2017
- Clark School of Engineering Distinguished Graduate Fellowship, University of Maryland, 2015-2016
- MCM Scholarship, IIT Kanpur, 2010-2014
- National Talent Search Examination (NTSE) scholarship by Government of India, 2008-2010
- Science Student Award by State Government of Uttar Pradesh, 2008

## RELEVANT COURSES

Computer Vision, Deep Learning, Robotics and Perception

Statistical Pattern Classification, Random Processes, Estimation & Detection Theory, Information Theory, Convex Optimization, Kalman Filtering

## SKILLS

Programming Languages and Libraries: Python, PyTorch, Tensorflow, Caffe Human Languages: Hindi (native), English, Spanish (beginner), Russian (beginner)

#### SERVICE

Reviewer for vision conferences (CVPR, ICCV, AAAI, etc.), and journals (IJCV, TIP, T-BIOM, etc.)

Coordinator, Quiz Events, Antaragni 2012 (inter-collegiate cultural festival of IIT Kanpur)

Coordinator, Crypto, Techkriti 2012 (inter-collegiate technical festival of IIT Kanpur)

Student Guide and Link Student, Counselling Service, IIT Kanpur, 2011-2012

#### OTHER INTERESTS

I read. I write. I quiz.