Bharat Singh

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Research Computer Vision: Object Detection, Action Detection, Video/Image Retrieval

Education

University of Maryland, College Park

PhD, Computer Science, 2018 (Expected), Advisor: Larry S. Davis

Indian Institute of Technology Madras

Bachelor and Master of Technology, Computer Science and Engineering, 2013

Selected Publications

1. **B. Singh**, M. Najibi* and L. Davis " SNIPER: Efficient Multi-Scale Training", *Submitted to NIPS 2018*
2. Z. Wu, N. Bodla, **B. Singh**, R. Chellappa and L. Davis " Soft Sampling for Robust Object Detection", *Submitted to NIPS 2018*
3. **B. Singh** and L. Davis "An Analysis of Scale Invariance in Object Detection - SNIP", *CVPR 2018, Oral* (Best Student Entry, COCO 2017)
4. **B. Singh**, H. Li*, A. Sharma and L. Davis "R-FCN-3000 at 30fps: Decoupling Classification and Detection", *CVPR 2018*
5. Z. Wu, **B. Singh**, L. Davis and V. Subrahmanian "Deception Detection in Videos", *AAAI 2018*
6. N. Bodla, **B. Singh***, R. Chellappa and L. Davis "Soft-NMS: Improving Object Detection With One Line of Code", *ICCV 2017*
7. X. Dai, **B. Singh**, G. Zhang, L. Davis and Y. Chen "Temporal Context Network for Activity Localization in Videos", *ICCV 2017*
8. S. Esmaeili, **B. Singh** and L. Davis "Fast-AT: Fast Automatic Thumbnail Generation using Convolutional Neural Networks", *CVPR 2017*
9. X. Han, **B. Singh***, V. Morariu and L. Davis "VRFP: On-the-fly Video Retrieval using Web Images and Fast Fisher Vector Products", *IEEE Transactions of Multimedia, 2017*
10. **B. Singh**, T. Marks, M. Jones, O. Tuzel and M. Shao "A Multi-Stream Bi-Directional Recurrent Neural Network for Fine-Grained Action Detection", *CVPR 2016*
11. G. Taylor, R. Burmeister, Z. Xu, **B. Singh**, A. Patel and T. Goldstein " Training Neural Networks Without Gradients: A Scalable ADMM Approach", *ICML 2016*
12. **B. Singh**, X. Han*, Z. Wu, V. Morariu and L. Davis "Selecting Relevant Web Trained Concepts for Automated Event Retrieval", *ICCV 2015*.

Skills DL Frameworks: Caffe, MxNet, Torch — Languages: C++, CUDA, Python, Javascript

Internships

NEC Research Labs America	June 2016 to August 2016
Mitsubishi Electric Research Labs	June 2015 to August 2015
INRIA/Ecole Centrale Paris	May 2012 to September 2012
Google	May 2011 to July 2011

References Larry S. Davis: lsd@umiacs.umd.edu, Tom Goldstein: tomg@cs.umd.edu, Michael Jones: mjones@merl.com

*Denotes equal contribution