Suman Saha

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EDUCATION

Ph.D. in Computer Science and Mathematics   (*September 2014 - November 2017*)
Oxford Brookes University, United Kingdom
Supervisors: Prof. Fabio Cuzzolin, Prof. Nigel Crook, Dr. Tjeerd Olde Scheper
Assessment committee: Prof. Mubarak Shah, Prof. Andrea Vedaldi, Dr. Faye R Mitchell
Research fields: Deep learning, human action detection and instance segmentation in videos
Research summary: My research revolved around proposing novel deep learning frameworks for human action detection in space and time. Specifically, my work centered around learning efficient image- and video-based deep representations for action detection and addressing the spatiotemporal action localization problem using dynamic programming.

M.Sc in Computer Science   (*September 2012 - June 2014*)
University of Bedfordshire, United Kingdom
GPA: 93.8/100.0 (double distinction)
Major fields: computer vision and intelligent agents
Thesis: A monocular vision approach for obstacle detection and collision avoidance for low-cost quadrocopters, related publication

Polytechnic Diploma Engineering   (*August 1999 - June 2002*)
Siddaganga Polytechnic College, Karnataka, India
Major field: computer science

PROFESSIONAL EXPERIENCE

ETH Zurich, Switzerland   (*August, 2018 - Present*)
Postdoctoral research fellow; **Supervisor:** Prof. Luc Van Gool
Topics: Unsupervised domain-adaptive learning, semi- and self-supervised learning from videos, multi-task learning, scene and human behavior understanding, face anti-spoofing

Oxford Brookes University, United Kingdom   (*December 2017 - July 2018*)
Postdoctoral research fellow; **Supervisor:** Prof. Fabio Cuzzolin
Topic: Deep learning based human action detection and future action prediction

Disney Research Zurich, Switzerland   (*April 2017 - July 2017*)
Research Intern; **Supervisor:** Dr. Romann M. Weber
Topic: Deep generative models for unsupervised facial expressions learning

University of Bedfordshire, United Kingdom   (*June 2013 - September 2013*)
Research Intern; **Supervisors:** Dr. A. Natraj and Dr. S. Waharte (psotdocs, University of Oxford)
Topic: New foundational structures for engineering verified multi-UAVs

R & D Division, Tata Steel Limited, India   (*November 2006 - August 2012*)
Software Analyst; **Supervisor:** Dr. Sumitesh Das (Chief Graphene Business at Tata Steel)

SELECTED PUBLICATIONS

Kanakis, Menelaos, David Bruggemann, **Suman Saha**, Stamatios Georgoulis, Anton Obukhov, and Luc Van Gool. "Reparameterizing Convolutions for Incremental Multi-Task Learning without Task Interference", *European Conference on Computer Vision* (**ECCV**), 2020.

Suman Saha, Wenhao Xu, Menelaos Kanakis, Stamatios Georgoulis, Yuhua Chen, Danda Pani Paudel, and Luc Van Gool. "Domain Agnostic Learning for Image and Video Based Face Anti-spoofing", *Computer Vision and Pattern Recognition* (**CVPR**) Workshop, 2020.

Suman Saha, Rajitha Navarathna, Leonhard Helminger, Romann M. Weber. "Unsupervised Deep Representations for Learning Audience Facial Behaviors", *Computer Vision and Pattern Recognition* (**CVPR**) Workshop, 2018.

Harkirat S. Behl, Michael Sapienza, Gurkirt Singh, **Suman Saha**, Fabio Cuzzolin, Philip H. S. Torr. "Incremental Tube Construction for Human Action Detection", *British Machine Vision Conference* (**BMVC**), 2018.

Suman Saha, Gurkirt Singh, Fabio Cuzzolin. "AMTnet: Action-Micro-Tube Regression by End-to-end Trainable Deep Architecture", *International Conference on Computer Vision* (**ICCV**), 2017.

Gurkirt Singh, **Suman Saha**, Michael Sapienza, Philip H. S. Torr, Fabio Cuzzolin. "Online Real time Multiple Spatiotemporal Action Localisation and Prediction on a Single Platform", *International Conference on Computer Vision* (**ICCV**), 2017.

Suman Saha, Gurkirt Singh, Michael Sapienza, Philip H. S. Torr, Fabio Cuzzolin. "Deep Learning for Detecting Multiple Space-Time Action Tubes in Videos", *British Machine Vision Conference* (**BMVC**), 2016.

Suman Saha, Ashutosh Natraj and Sonia Waharte. "A Real-time Monocular Vision-based Frontal Obstacle Detection and Avoidance for Low Cost UAVs in GPS Denied Environment", **ICAERST**, 2014.

TEACHING & PROFESSIONAL SERVICE

Thesis Supervisor: Supervised 8 master and 1 Ph.D. projects/theses at ETH Zurich
Conference/Journal Reviewer: CVPR, ICCV, BMVC, NeurIPS, IJCV, T-PAMI
Workshop Organizer: WebVision Challenge on Image/Video Classification (in conjunction with CVPR 2020)

COMPUTING SKILLS

Programming Language: Python, C/C++, Matlab, Java
Deep Learning Framework: PyTorch, Caffe, Theano