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Ph.D. in Engineering and Computer Science, The Australian National University, Australia

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Research Areas

Artificial Intelligence & Robotics

**Research Interests** 

Computer vision and Machine Learning

Teaching

CSE 583 Digital Image Processing

CSE 467 Digital Image Processing

CSE 215 Programming Language II

CSE 215L Programming Language II Lab

CSE 299 Junior Design Course

**CSE 173 Discrete Mathematics** 

CSE 445 Machine Learning

Selected Publications

Journals

Shafin Rahman, Salman H. Khan, Fatih Porikli, "Zero-Shot Object Detection: Joint Recognition and Localization of Novel Concepts," International Journal of Computer Vision (IJCV), 2020

Shafin Rahman, Salman H. Khan, Fatih Porikli, "A unified approach for conventional zero-shot, generalized zero-shot and few-shot learning," IEEE Transaction on Image Processing (TIP), 2018

Neil D. B. Bruce, Shafin Rahman and Diana Carrier, "Sparse coding in early visual representation: From specific properties to general principles," Neurocomputing, Vol. 171, pp. 1085–1098, ScienceDirect, Elsevier, 2016

Neil Bruce, Calden Wloka, Nick Frosst, Shafin Rahman and John K Tsotsos, "On Computational Modeling of Visual Saliency: Examining What's Right, and What's Left," Vision Research, Vol. 116, Part B, pp. 95–112, ScienceDirect, Elsevier, 2015

Shafin Rahman and Neil Bruce, "Visual Saliency Prediction and Evaluation Across Different Perceptual a Tasks," PLoS ONE, 2015

## **Conference Papers**

Ali Cheraghian, Shafin Rahman, Pengfei Fang, Soumava Kumar Roy, Lars Petersson, and Mehrtash Harandi, "Semantic-aware Knowledge Distillation for Few-Shot Class-Incremental Learning," IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2021

Ali Cheraghian, Shafin Rahman, Sameera Ramasinghe, Pengfei Fang, Christian Simon, Lars Petersson, Mehrtash Harandi, "Synthesized Feature based Few-Shot Class-Incremental Learning on a Mixture of Subspaces," IEEE/CVF International Conference on Computer Vision (ICCV), 2021

Yuhao Zhang, Md Zakir Hossain, Shafin Rahman, "DeepVANet: A Deep End-to-End Network for Multi-modal Emotion Recognition," NTERACT 2021 -18th IFIP TC. 13 International Conference on Human-Computer Interaction, 2021

Shafin Rahman, Salman H. Khan, Nick Barnes, "Improved Visual-Semantic Alignment for Zero-Shot Object Detection," Proceedings of the AAAI Conference on Artificial Intelligence (AAAI), 2020

Shafin Rahman, Salman H. Khan, Nick Barnes, "Transductive Learning for Zero-Shot Object Detection," IEEE/CVF International Conference on Computer Vision (ICCV), 2019

Shafin Rahman and Neil Bruce, "Saliency, Scale and Information: Towards a Unifying Theory," Neural Information Processing Systems (NIPS), 2015