

Team name	MMLAB
Team leader name	Limin Wang
Team leader address, phone number and email	HSB 703, The Chinese University of Hong Kong. (+852) 5425 0514 <a href="mailto:wlm011@ie.cuhk.edu.hk">wlm011@ie.cuhk.edu.hk</a> ; <a href="mailto:07wanglimin@gmail.com">07wanglimin@gmail.com</a>
Rest of team members	Zhe Wang, Wenbin Du
Team website URL (if any)	

<b>Title of the contribution</b>	Fusing multiple convolutional neural networks for event recognition
General method description	We fuse five kinds of ConvNets for event recognition. Specifically, we fine tune clarifai net pre-trained on the ImageNet dataset, Alex net pre-trained on Places dataset, Googlenet pre-trained on the ImageNet dataset and the Places dataset, and VGG 19-layer net on the ImageNet dataset. The prediction scores from these five ConvNets are weighted fused as final results.
References	<p>[1] A. Krizhevsky, I. Sutskever, and G. E. Hinton. Imagenet classification with deep convolutional neural networks. In <i>NIPS</i>, 2012.</p> <p>[2] K. Simonyan and A. Zisserman. Very deep convolutional networks for large-scale image recognition. <i>CoRR</i>, abs/1409.1556, 2014.</p> <p>[3] C. Szegedy, W. Liu, Y. Jia, P. Sermanet, S. Reed, D. Anguelov, D. Erhan, V. Vanhoucke, and A. Rabinovich. Going deeper with convolutions. <i>CoRR</i>, abs/1409.4842, 2014.</p> <p>[4] M.D. Zeiler and R. Fergus, Visualizing and understanding convolutional networks. In <i>ECCV</i>, 2014.</p>

<b>Describe data preprocessing techniques applied (if any)</b>	Image resize; Image cropping
Describe features used or data representation model (if any)	Convolutional Neural Network
Dimensionality reduction technique applied (if any)	

<b>Segmentation strategy used (if any)</b>	No
Classifier or method used to train and validate your results (if any)	Convolutional Neural Network
Large scale strategy (if any)	No

Compositional model used (scene context representation), i.e. pictorial structure (if any)	
Other technique/strategy used not included in previous items (if any)	
Method complexity analysis	The complexity of our method is related to the depth of ConvNets. It takes about one hour to test all the images.

<b>Qualitative advantages of the proposed</b>	Making use of the complementary properties of different ConvNets.
Results of the comparison to other approaches (if any)	No
Novelty degree of the solution and if it has been previously published	It is the first to fuse ConvNets of different depth and pre-trained on different datasets. We prove that these ConvNets are complementary to each other.

Language and implementation details (including platform, memory, parallelization requirements)	Cuda, matlab
Human effort required for implementation, training and validation?	Nothing
Training/testing expended time?	Training: 1 day Testing: 1hour
General comments and impressions of the challenge	Very good.