

MULTI-CLASS IMAGE CLASSIFICATION USING CONVOLUTIONAL NEURAL NETWORK

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Abstract ILSVRC (ImageNet Large Scale Visual Recognition Challenge) is a yearly competition that competes on classifying ImageNet image database that has 1000 classes and every year, a new architecture of convolutional neural network (CNN) that becomes a state of the art emerge. CNN is used because this method works very well on a large volume of data. From 1000 classes available on ImageNet, 100 class will be used in this research dataset to know which learning strategy for CNN performed best in the varying scenario. The best scenario is achieved by training the image in smaller resolution then training it again with a larger resolution. This scenario achieved an accuracy of 75.82%, it's quite high for a model that can classify 100 class. It's also performed best according to the evaluation of the confusion matrix generated by each model.

Keywords: convolutional neural network, multi-class, classification, image