CV ASSIGNMENT 8

Q1) lateral expansion of convolutions and max pooling, mandatory 1x1 convolution, depth concatenations, softmax function usage and multiple exits are distinguishing and few features of inceptionnet.

Q2) lateral expansion of convolutions and max pooling, mandatory 1x1 convolution, depth concatenation are part of inception block. Some had even exits with fully connected layers and softmax function. 1x1 convolution aimed to retain maximum features. A very large network aimed at learning as many features as possible.

Q3) dimensionality reduction aims at reducing variables and complexity of calculations while retaining as many features as possible.

Q4) netwrok’s performance improves in terms of speed and ease of calculations but certain features are lost in dimension reduction.

Q5) inception block, exit block with fully connected layers and softmax and initial single block of convolutions and maxpooling without lateral expansion.

Q6) resent involves another parallel connection that skips certain intermediate steps and joins as input at multiple levels.

Q7) skip connections prevent vanishing gradient problem, gives nonlinearity and additional learning capability.

Q8) residual block has skip connections.

Q9) we need not train model and its enormous parameters again. We can use pertrained models and also freeze/add layers.

Q10) neural networks learn features through updation of weights and biases as they propagate forward and backward. So, they make predictions and calculate errors and update weights to reduce errors.

Q11) in finetuning, we need not train model and its enormous parameters again. We can use pertrained models and also freeze/add layers.