

Exp No.	Model	Result	Decision + Explanation
1	Pre trained VGG16 + GRU	Overfits the training set. Validation accuracy was low : 76%	Overfitting can be reduced by applying dropout, normalization and by reducing units in GRU layer.
2	VGG16 + GRU with dropout and normalization	Validation accuracy reached 92%	Add dropout and normalization after all layers
3	Pre trained VGG16 + GRU with dropout and BatchNorm after each layer	Approx 73% accuracy on both training and validation set.	Problem of overfitting resolved.
4.	Pre trained VGG16 + CNN3D -BatchNorm after every CONV layer - Dropout after Dense layer. - Chosen optimizer as SGD with LR=0.01, Imagesize=120 x 120 Number of images=15	Model learning was not good and accuracy diff was close to 27%	Reduced learning rate so that gradient could propagate towards global minima.
5.	Architecture changed to 16, 32, 64, 128 and increased batch size to 100. Optimiser was still Adam to reduce lr on plateau.	Accuracy on both training and validation improved. Learning process was smooth	Good accuracy of 81% achieved with approx. 1 million learning parameters. This resulted in a leaner system which is deployable on smaller systems.
NOTE: Model learning was effective with just 15 frames. Initial 5 frames and those that were at the end did not contribute towards the accuracy of the model.			