

Exp No.	Model	Result	Decision + Explanation
1	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 BatchNormalization	Validation accuracy reached approximately 80% and Validation loss reduced to 0.54	Add dropout and normalization after all layers
3	Pre trained VGG16 + GRU with dropout and BatchNormalization after each layer	Validation loss reduced to 0.51	Problem of overfitting resolved.
4.	Pre trained VGG16 + - BatchNormalization + Bidirectional GRU	Model learning improved. Validation loss improved to 0.41	
5.	Conv3D model	Low training loss & high validation loss.	The initial Conv3D model shows very high accuracy for training data, and moderate accuracy for validation dataset.
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. Lot many improvements, experiments and variations can be added to improve these models, but due to limited computing resources, it is not possible to achieve. Even on Google Colab, training the model and machine learning is taking a lot of time.			