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| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Model 1 - Conv3D**  frame\_count=10  img\_y =100  img\_z =100 | Training Accuracy: 47%, Validation Accuracy:50 %  Model Analysis:  The accuracy of the Model is very Low | This was the first Model taken and the Image size chosen was small |
| **2** | **Model 2 -Conv3D**  Batch size = 40 ,  Epoch = 15,  Image Size - 160 \*160 | Training Accuracy: 86%, Validation Accuracy: 21%  Model Analysis:   The model is highly overfitting. | This Model was highly overfitting.  Changing the batch size and the image size |
| **3** | **Model 3 - Conv3D**  filter size to (2,2,2) image size to 120 x 120,  Batch Size = 30  No. of Epochs = 20  Added Dropout in the dense layer,  lr=0.0002 | Training Accuracy: 28%, Validation Accuracy: 15%  Model Analysis: Accuracy of the Model is very Low | As Model 2 was overfitting, the filter size and other parameters were changed, adding dropout and a Learning Rate of 0.002.  This did not help with improving the accuracy of the model |
| **4** | **Model 4: Conv3D**  Image size =120 \* 120 , Batch size - 20 , num\_epochs=25  filter size = (3,3,3)  dropout=0.25 | Accuracy is very low again for this model | Updated the image size , and Batch and change the filter to (3,3,3) , Added Drop in the layers , Still the model accuracy did not improve |
| **5** | **Model 5 :**  **Conv2D RNN + LSTM Model**  Batch size =20 ,  No. of Epochs = 20.  dropout=0.25 | Training Accuracy: 36% , Validation Accuracy: 43%  Model Analysis : The accuracy of the Model is very Low | Used CNN + RNN: CNN2D LSTM Model – Time DistributedThe model performance did not improve |
| **6** | **Model 6**  Conv2D layers + LSTM Layer + dropout + L2 regularization | Training Accuracy: 45%, Validation Accuracy: 25% Model Analysis: The accuracy of the Model is very Low | Added L2 regularization The Model performance did not improve |
| **7** | **Model 7**  Conv2D layers + LSTM Layer  Batch Size = 5 , No of Epoch =15 | Training Accuracy: 76% , Validation Accuracy: 28%  Model Analysis: Overfitting Model | This resulted in an overfitting model |
| **8** | **Model 8 –**  Conv2D layers + LSTM Layer  Using Transfer Learning - MobileNet | Training Accuracy: 76%, Validation Accuracy: 83%  Model Analysis: This Model has performed better than the other models | The Model performance is better than the other models |