|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Generator** | **Error** cannot import name 'imread' from 'scipy.misc | **Decided to use skimages instead of scipy**  **# https://docs.scipy.org/doc/scipy-1.1.0/reference/generated/scipy.misc.imread.html** |
| **2** | **Conv3D**  **Model\_2** | Train Acc = 0.9358  **Val loss = 0.875** | **We have added padding and the filter to retain spatial information in the image and Experimenting with different batch size, frame and epocs** |
| **3** | **Conv3D Model\_1 (we used frame 16, epoc 20)** | **Accuracy = .9304** | **Overall accuracy is good but val\_loss: 0.8974 which is very high which is indication of Overfitting** |
| **4** | **Conv3D Model\_2 (we used frame 30, epoc 30)** | **Accuracy .9572** | **With increase Frame and epocs the model accuracy is increased with validation loss of 0.5679** |
| **5** | **Conv3D Model\_3 (we used frame 30, epoc 20)** | **Accuracy = .9732** | **With Reduced parameter, we see increase in model accuracy is increased with validation loss of 2.7679** |
| **6** | **Conv3D Model\_4 with same pooling** | **Accuracy = .925** | **Changed to same pooling to padd with all side to retain the special information. With same pooling as well there was high validation loss** |
| **7** | **Conv3D**  **Model\_5**  **reduced kernel to (2,2,2)** | **Accuracy: 0.9946** | **The accuracy is increased dramatically and validation loss also has spiked.** |
| **8** | Conv2D+LSTM  **Model\_6** | **Accuracy : 0.966** | **The train accuracy is very good with .966 and also the validation loss is fallen to 0.7126, good improvemtn is seen with LSTM.** |
| **9** | mobilenet+LSTM **Model\_7** | **Accuracy:**  **1** | **The train accuracy is 1 and the validation loss is 0.745, in comarision with Convo2D+LSTM this model is little overfitted** |

From the above result mentioned above it is evident that Model\_6 i.e Conv2D+LSTM

With high accuracy with low validation loss which is found to be better model with comparison to other model.