|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| 1 | Conv3D | Throws Generator error | Cropped the images in square shape of 120 x 120 |
| 2 | Conv3D | Model accuracy was very low. | Adding one more Conv3D layer  AddingBatchNormalization after every Conv3D layer with Dropout |
| 3 | Conv3D | Accuracy: 0.22 | Increasing number of images per video.  Reducing batch size to 60.  Reducing filter size in 2nd Conv3d layer |
| 4 | Conv3D | Accuracy: 0.388 | Accuracy seems to be improving hence increasing number of epochs to 60 |
| 5 | Conv3D | Accuracy: 0.66  Val accuracy: 0.62 | Trying ConvLSTM as Conv3D not giving desired accuracy |
| 6 | ConvLSTM | Accuracy: 0.13  Val accuracy: 0.25 | Increasing batch size to 64  Increasing number of frames to 20  Adding one more Conv2D layer with BatchNormalization and MaxPooling2D |
| 7 | ConvLSTM | Accuracy : 0.64  Val accuracy: 0.5 | Adding one more Conv2D layer  Increasing number of epochs to 35 |
| 8 | ConvLSTM | Accuracy : 0.85  Val accuracy: 0.75 | Building a similar model with Conv3D to compare results |
| 9 | Conv3D | Accuracy : 0.95  Val accuracy: 0.75 | Training accuracy is more than validation accuracy. The model didnt improve after 40 epochs. Hence changing the architecture. |
| 10 | Time Distributed + GRU | Train Accuracy: 0.9554, Validation Accuracy: 0. 8203 | The model is working quite well on validation dataset with less trainable parameters(98,885), Lets add some drop outs after each layer, so that both train and validation accuracies will be closure. |
| 11 | Time Distributed + GRU with dropout0.3 | Train Accuracy: 0.8720, Validation Accuracy: 0.6016 | This is good model with training and validation accuracies with number of params 128,517. Let’s use different architecture of model with time distributed and ConvLSTM2D. |
| 12 | Time Distributed + ConvLSTM 2D | Train Accuracy: 0.90, Validation Accuracy: 0.937 | This model has good accuracy for both train and validation data. Hence finalizing this. |