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| EXPERIMENT NUMBER | MODEL | RESULT | DECISION + EXPLANATION |
| 1 | Conv3D | The model is having max accuracy Max. Training Accuracy  0.42786070704460144 Max. Validation Accuracy 0.4300000071525574 | This is the base model we built for this problem statement using with batch normalisation and dropouts. |
| 2 | Conv3D | Frames: 22, Batch size: 64, Epoch = 3  Max. Training Accuracy 0.6640316247940063 Max. Validation Accuracy 0.234375 Frames: 15, Batch size: 32, Epochs = 3  Max. Training Accuracy 0.6487119197845459 Max. Validation Accuracy 0.25 | (Batch size testing) Batch size is not helping much hence we will try out other options |
| 3 | Conv3D | Frames: 16, Batch size: 64, Epochs = 30  Max. Training Accuracy 0.663 Max. Validation Accuracy 0.625  Frames: 30, Batch size: 64, Epochs = 30  Max. Training Accuracy 0.844 Max. Validation Accuracy 0.875 | We are getting good accuracy for 30 frames.   (Try reducing the epochs in next experiment) |
| 4 | Conv3D | Frames: 30, Batch size = 64, Epochs = 20  Max. Training Accuracy 0.8716577291488647 Max. Validation Accuracy 0.5 | Model is overfitting.  (Trying to see effect of reducing both epochs and frames in next experiment) |
| 5 | Conv3D | Frames = 20, Batch Size = 64, Epochs = 20  Max. Training Accuracy 0.8716577291488647 Max. Validation Accuracy 0.625 | Training Accuracy improved but still it is overfitting.  (Model from 3rd experiment will good model) |
| 6 | Conv2DLSTM | Frames = 20, Batch Size = 32, Epochs = 30  Max. Training Accuracy 0.9719887971878052  Max. Validation Accuracy  0.8125 | The validation accuracy is 0.81 which is good but there is slight overfitting. |
| 7 | Conv2DLSTM (Transfer learning MobileNet + RNN) | (Transfer learning MobileNet + RNN)  Max. Training Accuracy 0.9496  Max. Validation Accuracy 0.8750 | The model on epoch 29 can be selected as best model as it is having 0.87 validation accuracy. |