Mitali Seth

|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Conv3D** | Max. Training Accuracy 0.38235294818878174  Max. Validation Accuracy 0.4399999976158142 | **Base model**  **Dropout = 0.25**  **Batch size = 20**  **Frames = 15** |
| **2** | **Conv3D** | Max. Training Accuracy 0.4313725531101227  Max. Validation Accuracy 0.3199999928474426  Training Accuracy increase little bit | **Since in base model we were not seeing good accuracy, I tried modifying learning rate to 0.001 and increased frames to 25 with number of epochs 10** |
| **3** | **Conv3D** | Max. Training Accuracy 0.8823529481887817  Max. Validation Accuracy 0.625  **With increase in batch size and number of frames saw good improvement in accuracy** | **Increase Frames to 30 Batch size to 64** |
| **4** | **Conv3D** | Max. Training Accuracy 0.9144384860992432  Max. Validation Accuracy 0.625 | **Since accuracy of validation data is not good enough**  **Changed learning rate to 0.0001 having other parameters same as model 3** |
| **5** | **Conv3D** | Max. Training Accuracy 0.8235294222831726  Max. Validation Accuracy 0.5 | **In model 4 we can clearly see overfitting on training data. Increased no of epochs to 30, but because of early stopping epochs stopped at 18.**  **Don’t see good result**  **Trying ConvLSTM as Conv3D not giving desired accuracy** |
| **6** | **ConvLSTM** | Max. Training Accuracy 0.8599439859390259  Max. Validation Accuracy 0.4375 | **n\_frames = 30**  **num\_epochs = 20**  **batch\_size = 32**  **Dropout = 0.2**  **LSTM = 256**  **Dense = 256**  **With 32 batch size don’t see good result.** |
| **7** | **ConvLSTM** | Max. Training Accuracy 0.855614960193634  Max. Validation Accuracy 0.625 | **Parameters same as model 6 but with batch size 64**  **With increase in batch size seeing increase in validation accuracy. We can see some overfitting here.** |
| **Final Model** | **ConvLSTM** | Max. Training Accuracy 0.7700534462928772  Max. Validation Accuracy 0.625 | **Increasing frame size to 30**  **Epochs = 30**  **batch size = 64**  **Without early stop**  **With this don’t see much overfitting** |

**Note – tried** L2 regularization, to resolve overfitting but it didn’t helped.