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| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Conv3D 1: Batch Size 10**  **Image size : (120,120)**  **Frames to sample : 30** | **Train accuracy : 0.37**  **Validation accuracy : 0.38** | **This is a base model. The is model is not able to the data.** |
| **2** | **Conv3D 1: Batch Size 30**  **Image size : (100,100)**  **Frames to sample : 18** | **Train accuracy : 0.31**  **Validation accuracy : 0.30** | **Reduced the size of the image and number of frames. Hence the accuracy also drops.** |
| **3** | **Conv3D 2: Batch Size 30**  **Image size : (100,100)**  **Frames to sample : 30** | **Train accuracy : 0.60**  **Validation accuracy : 0.25** | **We try a new model. But the model is overfitting on the data.** |
| **4** | **Conv3D 2: Batch Size 30**  **Image size : (100,100)**  **Frames to sample : 30** | **Train accuracy : 0.63**  **Validation accuracy : 0.67** | **Train the model for more epochs. The accuracy improves to 60+.** |
| **5** | **Conv3D 3: Batch Size 30**  **Image size : (60,60)**  **Frames to sample : 30** | **Train accuracy : 0.91**  **Validation accuracy : 0.88** | **We try another model.**  **This model is fitting the data and is giving a good accuracy but the model parameters are very high.** |
| **6** | **Conv3D 3: Batch Size 40**  **Image size : (60,60)**  **Frames to sample : 30** | **Train accuracy : 0.93**  **Validation accuracy : 0.90** | **We try running the model for more epochs. There is a slight increase in accuracy.** |
| **7** | **Conv3D 3: Batch Size 40**  **Image size : (60,60)**  **Frames to sample : 24** | **Train accuracy : 0.94**  **Validation accuracy : 0.96** | **Since the previous model was very large, we try to reduce the model parameters and also get a increase in accuracy.** |
| **8** | **Conv3D 3: Batch Size 40**  **Image size : (60,60)**  **Frames to sample : 18** | **Train accuracy : 0.92**  **Validation accuracy : 0.96** | **We reduce the model parameter more but the accuracy stays the same.** |
| **9** | **Conv3D 3: Batch Size 50**  **Image size : (60,60)**  **Frames to sample : 18** | **Train accuracy : 0.87**  **Validation accuracy : 0.84** | **We reduce the model parameter more and the accuracy also drops but not significantly.** |
| **10** | **ConvLSTM : Batch Size 50**  **Image size : (100,100)**  **Frames to sample : 18** | **Train accuracy : 0.58**  **Validation accuracy : 0.65** | **The LSTM model does not give much significant improvement in model.** |
| **11** | **Transfer Learning** | **Train accuracy : 0.99**  **Validation accuracy : 0.96** | **The transfer learning model gives a very good accuracy but the model size is very large.** |
| **Final Model** | **Conv3D 3: Batch Size 50**  **Image size : (60,60)**  **Frames to sample : 18** | **Train accuracy : 0.87**  **Validation accuracy : 0.84** | **We choose this since the model size is significantly less compared to other models and also the accuracy is good.** |