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| **ARCHITECTURE** | **MODEL** | **PARAMETERS** | **RESULTS** | **DECISION+EXPLANATION** |
| **CONV3D** | **1** | **357,541** | **Train Acc: 81%**  **Val Acc: 85%** | **Started with simple model, batch size 30, image size 64, gesture frames 30, channels 1, Epochs 25, LR 0.001 and Dense neurons 128. Statistically simpler model and good validation accuracy achieved** |
| **2** | **2,218,501** | **Train Acc: 98%**  **Val Acc: 89%** | **Increased Image size to 128, channels to 3 and Dense neurons to 256. Number of parameters drastically increased. Both training and validation accuracy increased as well.** |
| **3** | **645,637** | **Train Acc: 93%**  **Val Acc: 85%** | **Reduced gesture frames to 16 and also reduced LR to 0.0005.**  **Training and Validation accuracy dropped slightly and the number of trainable parameters are lesser** |
| **4** | **357,797** | **Train Acc: 96%**  **Val Acc: 88%** | **Same as model 1 but increased number of epochs to 35. Got better results but there is a spike in the loss graph at around 25th epoch. So, choosing model 1 over it .** |
| **CNN+LSTM** | **5** | **680,357** | **Train Acc: 78%**  **Val Acc: 63%** | **Tried CNN 2D(5-layer architecture )with LSTM. Parameters similar as Model 1 with Dropout as 0.25. Simple base model achieved but accuracy was very less.** |
| **6** | **2,572,677** | **Train Acc: 90%**  **Val Acc: 72%** | **Image size increased to 128 and number of channels to 3. Better results were seen .** |
| **7** | **4,916,869** | **Train Acc: 67%**  **Val Acc: 68%** | **Increased Dense neurons to**  **256 . Reduced Batch Size to 25. Models’ performance deteriorated. Also, around 5 million parameters, took much time to train.** |
| **8** | **1,838,501** | **Train Acc: 93%**  **Val Acc: 88%** | **Reduced image size to 64 and increased Dense Neurons to 512. Significant reduce in parameters and better accuracy achieved.** |
| **CNN+GRU** | **9** | **852,901** | **Train Acc: 61%**  **Val Acc: 62%** | **Tried CNN 2D(5-layer architecture )with GRU. Parameters similar as Model 1 with Dropout as 0.25. Model accuracy is not good.** |
| **10** | **2,049,413** | **Train Acc: 94%**  **Val Acc: 69%** | **Increased Image size to 128, which helped to improve training accuracy but validation accuracy improved slightly.** |
| **11** | **1,444,261** | **Train Acc: 75%**  **Val Acc: 66%** | **Increased Batch Size to 40. This helped in fixing overfitting. However, accuracy was below 80%** |
| **12** | **1,395,589** | **Train Acc: 91%**  **Val Acc: 78%** | **This time tried with Image size 100 and Batch size 40. Better results than previous**  **model. However, model is**  **still overfitting** |