Gdrive Link :- <https://drive.google.com/file/d/1ZifcweoWYz_YbErJN-AaQ8GjkICJ4nxx/view?usp=sharing>

|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **0 – model\_1** | **Conv3D** | **- Train Acc: 1.0**  **- Val Acc: 0.5** | **- Model Over fits the Training Dataset**  **- Ablation Data of 6 Image Indexes** |
| **1 – model\_2** | **Conv3D** | **- Train Acc: 0.98**  **- Val Acc: 0.69** | **- Batch Normalization Improves Training Time.**  **-Validation Acc improves to 0.69 with Batch Normalization.** |
| **2- model\_3** | **Conv3D** | **- Train Acc: 0.86**  **-Val Acc: 0.62 (epoch- 9/10)** | **-Dropout Layer reduces Over fitting but drops Val Acc** |
| **3- model\_4** | **Conv3D** | **-Trainable Parameters**  **Increase**  **From**  **112 – 240**  **-Train Acc: 0.64**  **-Val Acc: 0.56** | **- Adding More Layers to Improve Performance**  **-Adding More Data to Improve Val Acc**  **-Model Performance Drops**  **- Model Parameters Increase from 112-240** |
| **4- model\_5** | **Conv3D** | **-Train Acc: 0.93**  **- Val Acc: 0.86**  **(epoch 9/10)** | **Increasing the amount of Trainable data to Improve Val Acc/ Changing Optimizer to LeakyReLU** |
| **5- model\_a**  **6- model\_b**  **7- model\_c**  **8- model\_d**  **9- model\_e**  **10- model\_f** | **Conv3D** | **-Img\_Indx**  **-Batch\_Size**  **-Epochs**  **-Kernel Size**  **-Reducing Number of Layers** | **model\_a through model model\_f is Experimenting with Other different Parameters like-**  **- Sampling Random Images through different Img\_Indx**  **- Running Bigger Batch Sizes**  **- Running Longer Epochs**  **- Trying Different Kernel Sizes**  **- Experimenting with Number of Layers**  **However, none of the Experiments resulted in a Significantly Better Results than model\_5.** |
|  |  |  |  |
| **11- model** | **Conv2D + RNN LSTM** | **Accuracy: 0.53** | **Model Underfitting to Ablation Data due to Low Computational Power** |
| **12** | **Conv2D + RNN LSTM** | **Model Not Trainable due to lack of Infrastructural Power** | **………………** |
| **Final Model** | **Conv3D** | **-Train Acc: 0.93**  **- Val Acc: 0.86** | **a-model-00008-0.24623-0.91729-0.59140-0.75500.h5** |