This is a sample write-up. The write-up need not be in tabular form.

It doesn’t state that ConvLSTM will give you better results than Conv3D. The explanation should be as detailed as possible so that the logic behind the decision is conveyed. Also, there are a lot of things you can experiment with in the generator function and elsewhere. Please do not forget to specify the exact metric values, here Accuracy which drives your decision.

You can draw inspiration from the concepts taught in the Industry demo in CNNs to experiment with the data and different architectures.

|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Simple Conv3D Model** | **Train Acc:-92.27%**  **Val Acc :- 53.33%** | **Cropped the images to 120\*120 dimension, trying to fir the model** |
| **2** | **Conv3D with Batch Normalization** | **Train Acc:-95.92%**  **Val Acc :- 27.50%** | **Early stop as loss is very high need to be trained with higher epoch** |
| **3** | **Conv3D , Batch Normalization and Dropout** | **Train Acc:-97.38%**  **Val Acc :- 32.50%** | **Early stop as loss is very high need to be trained with higher epoch** |
| **4** | **Conv2D with LSTM** | **Train Acc:-86.44%**  **Val Acc :- 19.17%** | **Early stop as loss is very high need to be trained with higher epoch** |
| **5** | **Conv2D with GRU** | **Train Acc:-84.55%**  **Val Acc :- 20%** | **Early stop as loss is very high need to be trained with higher epoch** |
| **6** | **Transfer Learning (VGG16) with LSTM Model** | **Train Acc:-97.38%**  **Val Acc :- 59.17%** | **With transfer learning accuracy is increasing with LSTM in comparison to previous model.** |
| **7** | **VGG16 + GRU** | **Train Acc:-93.29%**  **Val Acc :- 50.83%** | **With transfer learning accuracy is increasing with GRU in comparison to LSTM model** |
| **8** | **TransferLearning(Mobilenet) + GRU Model** | **Train Acc:-97.08%**  **Val Acc :- 90.83%** | **Transfer learning (using Mobilenet) and GRU given the best performance** |

Output .hs location path

<https://drive.google.com/drive/folders/1UnirheRb6YLq7rGRpp6m135h20IpsQ2P?usp=share_link>