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.

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| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1. Model 1 (conv\_3d1)** | **Conv3D** | **Highest Validation Accuracy: 78%**  **The model is highly overfitting.** | **Next Augment data using cropping.** |
| **2. Model 2(conv\_3d2)** | **Conv3D** | **Highest Val. Accuracy remains the same.**  **The model is not overfitting.** | **Next we will reduce the filter size and image resolution. Moreover since we see minor oscillations in loss, we try reducing the learning rate to 0.0002** |
| **3. Model 3 (conv\_3d3)** | **Conv3D** | **Highest Val. Accuracy: 75%**  **The model is quite stable.** | **Parameters are almost reduced by half. Trying adding more layers in the model.** |
| **4. Model 4 (conv\_3d4)** | **Conv3D** | **Highest Val. Accuracy : 86%**  **Model is working pretty good and is not overfitting.** | **Next we tried adding dropouts in convulational layers.** |
| **5. Model 5 (conv\_3d5)** | **Conv3D** | **Overfitting and validation accuracy has dropped pretty much.** | **Next reducing the Parameters by decreasing the dense neurons.** |
| **6. Model 6 (conv\_3d6)** | **Conv3D** | **At the higher end model starts to overfit. Works better than model 5.** | **Next we try increasing the augmentation.** |
| **7. Model 7 (conv\_3d7)** | **Conv3D** | **Works better than model 6. It is stable and doesn’t overfit.** | **We stop here as we don’t see much of the progress.** |
| **Final Model** | **Model 4 (conv\_3d4)** | **Val Accuracy: 86%** | **Achieved a good accuracy wherein the model doesn’t overfit and is stable.** |