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| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Conv3D 3 x 3 kernel filter with Dropout and without Batch Normalization**  **1 Fully Connected Dense Layer**  **No of Image Indexes Used: 5**  **Image Dimensions: 120 x 160**  **Batch Size: 10**  **Epochs : 20** | **Validation Accuracy drops significantly compared to Training Accuracy Best Training Accuracy is 0.9969 and Validation Accuracy is 0.7800** | **There is overfitting.**  **Few more image indexes are to be added to generalize the network and more Convolution layer needs to be added to generalize the network** |
| **1.1** | **2 Conv3D 3x3 kernel filter with Batch Normalization**  **1 Fully Connected Dense Layer**  **No of Image Indexes Used: 10**  **Epochs: 20** | **Best Training Accuracy: 0.9713 and Validation Accuracy: 0.8200** | **Model is having good training accuracy and validation accuracy.**  **But training data seems to overfit the data a bit**  **Adding normalization to convolution** |
| **2** | **2 Conv3D 3x3 kernel filter with Batch Normalization**  **1 Fully Connected Dense Layer**  **No of Image Indexes Used: 10**  **Epochs: 20** | **Training Accuracy: 0.9834**  **Validation Accuracy:**  **0.8600** | **Model with good validation Accuracy of 0.8600** |
| **3** | **2 Conv 2D TimeDistributed layer**  **With Batch Normalization**  **1 GRU layer**  **No of Image Indexes Used: 10**  **Epochs: 20** | **Training Accuracy:**  **0.4555**  **Validation Accuracy:**  **0.2800** | **The loss function of this images is not getting minimized using the GRU layer.**  **Hence this is not an good choice model** |
| **4** | **1 Conv3D 3x 3 kernel filter with Batch Normalization**  **1 Conv LSTM2D 3 x 3 kernel filter**  **1 Fully Connected Dense Layer**  **No of Image Indexes Used: 10**  **Epochs: 20** | **Training Accuracy:**  **0.9532**  **Validation Accuracy:**  **0.8000** | **The Training and Validation Accuracy is having greater validation loss then Conv 3D layers with Batch Normalization.**  **Hence model having Conv 3D layers with Batch Normalization(Experiment 2) is Final Model.** |
| **Final Model** | **2 Conv3D 3x3 kernel filter with Batch Normalization**  **1 Fully Connected Dense Layer**  **No of Image Indexes Used: 10**  **Epochs: 20** | **Training Accuracy: 0.9834**  **Validation Accuracy:**  **0.8600** | **The Training and Validation Accuracy is having greater validation loss then Conv 3D layers with Batch Normalization.**  **Hence model having Conv 3D layers with Batch Normalization(Experiment 2) is Final Model.** |