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| --- | --- | --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Training/Validation Accuracy** | **Total Parameters** | **Result** | **Decision + Explanation** |
| **1** | **Conv3D- Batch Size = 40, number of epochs = 15** | **Training Accuracy:93%**  **Validation Accuracy: 24%** | 1117061 | **Highly over fitting mode** | **To balance the training and validation accuracy, we will add drop out layers** |
| **2** | **Added 50% dropout** | **Training Accuracy:81%**  **Validation Accuracy: 36%** | 3638981 | **Overfitted Model** | **The improvement is not much from previous model, it is still overfitting** |
| **3** | **To improve the performance, we reduce the filter size and image resolution** | **Training Accuracy:72%**  **Validation Accuracy: 24%** | 1762613 | **Over fitted model** | **This is not a good model still, maybe it requires more training. Adding more layers in the next step** |
| **4** | **Added 4 more Conv 3D layers** | **Training Accuracy:79%**  **Validation Accuracy: 75%** | 2,556,533 | **Better model than previous models** | **Training and validation accuracy seem balanced. However, need to check if it can be improved further** |
| **5.** | **Reducing filter size to the previous model** | **Training Accuracy:86%**  **Validation Accuracy: 30%** | 669,349 | **Validation loss did not improve.** | **Taking model 4 as the best model in the current scenario** |

**Final Model: Model 4**

**Training Accuracy:79%**

**Validation Accuracy: 75%**