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| --- | --- | --- | --- |
| **Experiment Number** | **Model** | **Result** | **Decision + Explanation** |
| **1** | **Conv3D** | **categorical\_accuracy: 0.9135**  **val\_categorical\_accuracy: 0.7500** | **Model is Overfitting using basic Conv3D. So trying to add Dropout to the model and removing BatchNormalization and checking if that helps.** |
| **2** | **Conv3D** | **categorical\_accuracy: 0.9239**  **val\_categorical\_accuracy: 0.8000** | **Model\_2 is slightly better using Dropout. But still overfits . So in next model planning to add both BatchNormalization and Dropout and checking if that helps** |
| **3** | **Conv3D** | **categorical\_accuracy: 0.8166**  **val\_categorical\_accuracy: 0.4000** | **Model\_3 is behaving more worst than the before hence in next step we will build custom Conv2D + LSTM** |
| **4** | **Conv2D + LSTM** | **categorical\_accuracy: 0.8028**  **val\_categorical\_accuracy: 0.6667** | **In Model\_4 we are using a custom Conv2D + LSTM. This also overfitting the data but better in terms of categorical\_accuracy. In next model we will try to use GRU in terms of LSTM** |
| **5** | **Conv2D + GRU** | **categorical\_accuracy: 0.8824**  **val\_categorical\_accuracy: 0.6667** | **In Model\_5 we are using a custom Conv2D + GRU. Still the overfitting doesn’t persists. Hence we will try using Augumentation.** |
| **6** | **Agumented Conv3D** | **categorical\_accuracy: 0.7439**  **val\_categorical\_accuracy: 0.4833** | **In Model\_6 we are using custom augumentation using Conv3D.**  **Still the overfitting is there are model is not looking good. Hence we will use Transfer Leaning.** |
| **7** | **Transfer Learning:**  **Mobilenet + LSTM** | **categorical\_accuracy: 0.9619**  **val\_categorical\_accuracy: 0.7500** | **In Model\_7 we are using Transfer Learning with LSTM we can see improvement but also still overfitting is present we can use GRU it will helps to reduce overfitting.** |
| **8** | **Transfer Learning:**  **Mobilenet + GRU** | **categorical\_accuracy: 0.8235**  **val\_categorical\_accuracy: 0.7833** | **In Model\_8 we are using Transfer Learning with GRU we can see that this is overall the best model we are getting good training and testing accuracy hence we can build take this as the final model.** |

Above table is the findings in the gesture Recognition model using 8 different models By using Tansfer Learning with GRU I have got the best model.