

Models	Batch Size	Number of images	Image Size	Training Accuracy (%)	Validation Accuracy (%)
1.(Conv3d)	10	15	100 X 100	22.5	20
2.(Conv3d)	15	20	100 X 100	18.2	27
3.(Conv3d)	15	25	120 X 120	24.2	16.4
4.(Conv3d)	30	20	160 X 160	32.76	22
5.(Conv3d)	35	25	160 X 160	51.24	28
6.(Conv3d)	25	20	160 X 160	53.4	26
7.(Conv3d)	25	30	120 X 120	51.6	49.2
8.(Conv3d)	20	25	140 X 140	54.4	23.2
9.C2d+lstm	20	18	120 X 120	48.04	56.00

- The model was run raw with batch size 10, no of images = 15 and image size of 100,100. We ran into OOM error. Needed to check the impact of image size, number of images and the batch size.
- Kept the image size to 120x120 and Increases the batch size to 15, and the model successfully started computing the accuracies. Hence the image sizes were decreased in the further models. Batch size were kept optimal at 10-30
- Model 1 to 4 were ran to analyze the impact of the respective parameters on the accuracy
- From the numbers obtained from Model 1 to Model 4, we observe that batch size has less impact on the accuracies. Hence we further optimized the number of images and image resolution.
- Model 5, we had very high training accuracy while lower validation accuracy. This was a problem of overfitting. Needed to add drop some dropout layers
- Model 6 resulted in the same case of overfitting. So reduce the learning rate.
- Model 7 gave a very good score, though the accuracies are quite low. We decreased the resolution in this model. Here we reduced the filter size to (2,2,2) and we achieved some good results with low parameters
- Model 8 we added more drop out layers and we saw more overfitting. In the next experiments we try to reduce the model size since we are dealing with a lot of parameters
- In Model 9, we reduced the number of parameters. We increased the filter size, decrease the neuron density to 64 and we achieved some stable results with highest accuracy from all the previous models.