**Gesture Recognition – Write up**

**Experiments**

**Experiment 1 - Model with batch size - 20 Epoch – 1**

Created a Conv 3D model with batch 20 and epoch 1.

Validation accuracy = 0.16 Training accuracy = 0.44

Accuracy is not that great. Also

There is clear sign of overfitting as the difference between the training accuracy and validation accuracy is more.

**Experiment 2 – Model with batch size – 20 and epoch – 30**

Created a Conv 3D model with batch 20 and epoch 30.

Validation accuracy = 0.16 Training accuracy = 0.70

Accuracy is not that great. Also, there is clear sign of overfitting as the difference between the training accuracy and validation accuracy is more.

**Experiment 3 – Model with batch size – 15 and epoch – 30, dropout 0.25 and dense 64**

Created a Conv 3D model with batch 15 and epoch 30 dropout 0.25 and dense 64

Validation accuracy = 0.97 Training accuracy = 0.88

This is the best accuracy in all the experiments that has been run. Also, the difference between the validation accuracy and training accuracy is less which shows that there is not overfitting now.

**Experiment 4 – Model with batch size – 15 and epoch – 30, dropout 0.4 and dense 128**

Created a Conv 3D model with batch 15 and epoch 30 dropout 0.4 and dense 64

The idea here is to experiment with the parameters for the model dense layer

Validation accuracy = 0.8974 Training accuracy = 0.8300

This accuracy is decent. Also, the difference between the validation accuracy and training accuracy is less which shows that there is not overfitting now.

**Experiment 5 – Model with batch size – 20 and epoch – 30, dropout 0.4 and dense 64**

Created a Conv 3D model with batch 15 and epoch 30 dropout 0.4 and dense 64

The idea here is to experiment with the parameters for the model dense layer

Validation accuracy = 0.8974 Training accuracy = 0.8300

This accuracy is decent. Also, the difference between the validation accuracy and training accuracy is less which shows that there is not overfitting now.

**Experiment 6 – Conv 2D + LSTM**

Created a Conv 2D model with batch 20 and epoch 30

The idea here is to run experiment with the parameters for the model dense layer

Validation accuracy = 0.77 Training accuracy = 0.98

This accuracy is decent. Also, the difference between validation and training accuracy is slightly higher which means that there is overfitting.