1. Do you get the same results if you run the Notebook multiple times without changing any parameters?

Answer: No, we won’t get the exact same result even without changing any parameters because within the framework itself there is randomization and the kernel initialization is also randomized. To prevent this a “seed” can be set so as to reproduce the same results.

1. What is the effect of adding more neurons to each Conv2D layer?

Answer: Generally, adding more neurons to the Conv2D layers will improve the accuracy of the AI model as the model we will be able to extract more features but after a certain threshold the accuracy will deteriorate as model will overfit on the training data.

1. What happens if we manipulate the value of dropout?

Answer: The use of drop out layer is used as a Regularization technique in the neural network.

Basically, the idea is to best fit the model which is overfitting on the dataset using the dropout which will essentially deactivates certain percentage of the neurons.

If the dropout is more then the model will not learn at all.

1. What is the effect of adding more activation layers to the network?

Answer: The main purpose of adding activation layer is to introduce non-linearity to the network. That means the activation layers helps in “how” the network weights get updated.

As such there is no empirical evidence that adding more activation layers will result in better accuracy.

1. What is the purpose of the MaxPooling2D layer?

Answer: There are 2 main purposes of the MaxPooling2D layer is:

* Reduce the parameters in the model.
* Select the max features out of each kernel slide of the feature map.