HYPERTUNING

Summary

A hyperparameter tuning is a [parameter](https://en.wikipedia.org/wiki/Parameter) whose value is used to control the learning process. The above observation shows, the variations in the performance measure while hyper tuning.

* **Units**: The increase in the unit from 8, 16, 32, 64, 128, we could see that there is very minimal change in the accuracy whereas the loss function decreases. Also, the epoch values are generated at the early cycle as units increase.
* **Hidden Layers**: The increase in the number of hidden layers from 1 to 3, we observed there is no change in accuracy and deflection in the loss function.
* **Loss Function**: Using “mse” as loss function for IMDB dataset, loss value is low when compared to binary cross entropy.
* **Activation Function**: The accuracy of tanh activation function for the model is low and degrades the performance due to vanishing gradient problem.
* **Regularization**: Regularization gives a significantly lower loss with less overfitting compared to initial model and accuracy the L-2 model showing slightly better accuracy.
* **Dropout**: The dropout also helps gain a lower loss function but does not affect accuracy.