Effects of Hyper parameter Tuning

In statistics, hyperparameter is a parameter from a prior distribution; it captures the prior belief before data is observed.

Model parameters are the properties of training data that will learn on its own during training by the classifier or other ML model.

For Linear Regression, we used -

1. L1 Regularization aka Lasso Regularization– This add regularization terms in the model which are function of absolute value of the coefficients of parameters. The coefficient of the paratmeters can be driven to zero as well during the regularization process. Hence this technique can be used for feature selection
2. L2 Regularization aka Ridge Regularization—This add regularization terms in the model which are function of square of coefficients of parameters. Coefficient of parameters can approach to zero but never become zero.
3. Combination of the above two such as Elastic Nets– This add regularization terms in the model which are combination of both L1 and L2 regularization.

For Random Forest, we used –

No of Trees – If the tree length increases the accuracy value will be accurate.

Depth of the tree – The parameter present in the Random Forest Regressor is used to specify the depth of the tree (max_depth)