Model Building

In [29]:
```
from sklearn.model_selection import cross_val_score, train_test_split
X_train, X_test, Y_train, Y_test = train_test_split(X ,Y ,test_size = 0.3,random_state = 3)
```

In [30]:
```
from sklearn.ensemble import RandomForestRegressor
from sklearn.metrics import r2_score
regressor = RandomForestRegressor(n_estimators = 1000,max_depth=10,random_state=34)
```

In [31]:
```
regressor.fit(X_train,np.ravel(Y_train,order='C'))
```

Out[31]:
```
RandomForestRegressor(max_depth=10, n_estimators=1000, random_state=34)
```

In [32]:
```
y_pred = regressor.predict(X_test)
print(r2_score(Y_test,y_pred))
```

```
0.834527626497731
```

In [33]:
```
filename = 'model.sav'
pickle.dump(regressor,open(filename,'wb'))
```