**Assignment 1**

***Description of the forecasting problem***

This forecasting problem deals with predicting the housing prices based on the attributes of a house like number of bedrooms, number of bathrooms, number of floors and the total area of the house in square feet.

Y (Variable of interest) = Price of the house

X1 = number of bedrooms

X2 = number of bathrooms

X3 = number of floors

X4 = Total area in square feet

Where X1, X2, X3 and X4 are the independent variables/attributes, based on the values of which the dependent variable Y can be predicted.

***Description of the available data***

|  |  |  |
| --- | --- | --- |
| **Column name** | **Type** | **Description** |
| Id | Numeric | a notation for a house |
| date | String | Date on which the house was sold |
| price | Numeric | Price of the house |
| bedrooms | Numeric | Number of bedrooms in the house |
| bathrooms | Numeric | Number of bathrooms in the house |
| sqft\_living | Numeric | Square feet area of the living room |
| sqft\_lot | Numeric | Square feet area of the whole house |
| floors | Numeric | Number of floors/levels in the house |
| waterfront | Numeric | House which has the view of a waterfront |
| view | Numeric | Has been viewed |
| condition | Numeric | How good the condition is (Over all) |
| grade | Numeric | Overall grade given to the housing unit,  based on King County grading system |
| sqft\_above | Numeric | Square feet of the house apart from basement |
| sqft\_basement | Numeric | Square feet of the basement |
| yr\_built | Numeric | Year in which the house was built |
| yr\_renovated | Numeric | Year in which the house was last renovated |
| zipcode | Numeric | Zip Or Postal code of the area |
| lat | Numeric | Latitude Co-ordinate |
| long | Numeric | Longitude Co-ordinate |
| sqft\_living15 | Numeric | Living room area in 2015 (Implies some renovations) |
| sqft\_lot15 | Numeric | Lot size area in 2015 (Implies some renovations) |

**Attributes used:**

Y (Variable of interest) = Price of the house

X1 = number of bedrooms

X2 = number of bathrooms

X3 = number of floors

X4 = Total area in square feet

***Short overview of the selected algorithms***