GROUP – 4 : Multiple/Multivariate Regression

By : Abhishek Bhardwaj, Abhishek Gupta,
Adarsh Nishad, Aishwary Bajpai

Exercise for You:

Q1: What Is Multiple Linear Regression (MLR)?

Q2: How to Use Multiple Linear Regression explain with proper example?

Q3: What are the Difference Between Linear Vs Polynomial Vs Multiple Regression?

Q4: Why would one use a multiple regression over a simple OLS regression?

Q5: What is feature scaling? Explain methods used for feature scaling with proper example.

Q6: Why do we use feature selection techniques while training Multivariate Regression models?

Q7: Explain T-test with proper example.

Q8: Explain F-test with proper example.

Q9: Consider the following set of points:

{(-2 , -1) , (1 , 1) , (3 , 2)}

a) Find the least square regression line for the given data points.

b) Plot the given points and the regression line in the same rectangular system of axes.

Q10: a) Find the least square regression line for the following set of data

{(-1 , 0),(0 , 2),(1 , 4),(2 , 5)}

b) Plot the given points and the regression line in the same rectangular system of axes.

Q11: The values of y and their corresponding values of y are shown in the table below

x	0	1	2	3	4
y	2	3	5	4	6

a) Find the least square regression line y = a x + b.

b) Estimate the value of y when x = 10.

Q12: The sales of a company (in million dollars) for each year are shown in the table below.

x (year)	2005	2006	2007	2008	2009
y (sales)	12	19	29	37	45

a) Find the least square regression line y = a x + b.

b) Use the least squares regression line as a model to estimate the sales of the company in 2012.