Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

EXPERIMENT NO 2

Aim: To write the implementation of linear regression.

Objective:- To understand the use of simple linear regression techniques by implementing user define dataset and importing dataset

Description:

Regression analysis is a very widely used statistical tool to establish a relationship model between two variables. One of these variables is called a predictor variable whose value is gathered through experiments. The other variable is called response variable whose value is derived from the predictor variable.

In Linear Regression these two variables are related through an equation, where the exponent (power) of both these variables is 1. Mathematically a linear relationship represents a straight line when plotted as a graph. A non-linear relationship where the exponent of any variable is not equal to 1 creates a curve.

The general mathematical equation for a linear regression is

$y = ax + b$

Following is the description of the parameters used –

y is the response
variable. x is the
predictor variable.

a and b are constants which are called the coefficients.