Logistic Regression is a linear regression method

Regression is used to determine how strongly correlated one attribute is to another within the training data and tries to determine a mathematical relationship between all the attributes.

In linear regression, a linear equation, y = mx + b + u, is formulated to fit the dataset where:

* y is the predicted outcome that is dependent variable to X.
* m is the slope of the line.
* x is the independent variable.
* b is the y intercept
* u is the regression residual.
  + When a prediction value, ŷ, is made the difference from the observed value, y, is called the residual, e. e = y – ŷ. Therefore, each data point will have one residual value. When a random pattern of residuals is observed then it indicates that is supports a linear model.

In non linear regression, a polynomial of higher power than 1, Y = a + b1X1 + b2X2 + ... + btXt + u, is formulated to fit the dataset, to use two or more independent attributes for the prediction.

* Logistic Regression (LR); linear
* Linear Discriminant Analysis (LDA); linear
* K-Nearest Neighbors (KNN); nonlinear
* Classification and Regression Trees (CART); nonlinear
* Gaussian Naive Bayes (NB); nonlinear
* Support Vector Machines (SVM); nonlinear