**Logistic Regression**

**Implementation : We implemented 4 functions within the class**

Method 1 (\_init\_(self,learning\_rate=0.001 , n\_iters=1000)):The \_init\_ constructor passes in the learning rate and the number of iterations that our model is going to run on. We also initialize the weights and the bias to None for the Logistic Regression Model

Method 2(fit(self,X,y)):fit is the method we’ll be using to train our model. In Logistic Regression it takes the X dataset and the y output values we then get the number of features and the number of samples from the shape of X after that we initialize the weights and bias with zeros and zero respectively. We then calculate the gradient Descent

Method 3(\_sigmoid(self,X)): The sigmoid function maps any real value into another value between 0 and 1

Method 4(predict(self,X)):Predicts the output of a given list of inputs. The function will return the probability of our observation X being either True or False (1 or 0 respectively)

It uses a linear\_model also defined in the fit method during gradient descent. The linear\_model is then passed to the sigmoid function and then the Probability is determined