CONL708: Assignment 3: Linear and Logistic Regression comparison

Word Count: 190

I completed this report independently

13/09/2022

Linear Regression plots a plane with minimum distance or best fit between itself and datapoints to predict a target value, based on the dependence between the dependent against the independent variables [1,3,5]. One example of Linear Regression being using in a Business Intelligence setting, would be to train a model to predict future sales, based on historical data from the previous 5 years of sales.

Logistic Regression predicts outcomes based on quantitative relationships between variables, assigning probabilities to show a qualitative output to show the likelihood of belonging to one class or not from 0 to 1, via a sigmoid function [2,4,6]. One example of Logistic Regression in a Business Intelligence setting would be to classify whether a customer is a new customer (1), or an existing one (0).

One similarity these types of models share, is that both use independent feature variables (x) to try and predict a dependant target variable (y).

One Difference between these models is that whilst Linear Regression provides a target in terms of a continuous value, the aim of Logistic Regression aims to provide a discrete value as its target in most cases [6].

# References

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