Logistic Regression

GitHub Rep: github.com/ibraouh/logistic-regression

Introduction

Logistic Regression is a simple **machine leaning** model that is used with the condition that the dependent variable, meaning the target, is **categorical**.

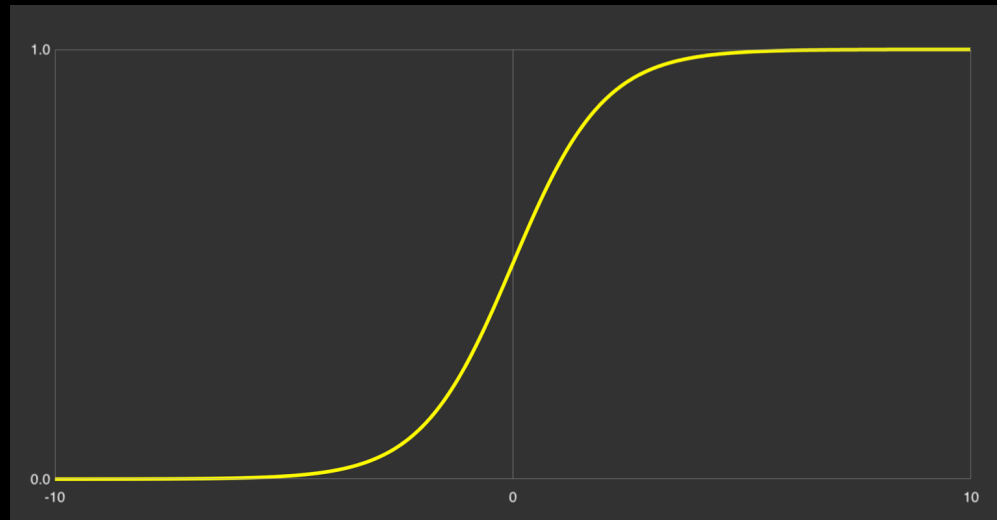For example, Logistic Regression can predict if an email is spam (output of 1) or not (output of 0).

Similar Algorithm: Linear Regression.

Model

Output = 0 or 1

Hypothesis: Z = WX +B

hθ(x) = sigmoid(Z)

How it works

1. Linear Regression

2. Logistic Regression

a. Analysis of the Hypothesis   `Z = WX + B`

b. Mathematical Analysis of the probability

c. Types of Logistic Regression

d. Decision Boundaries

e. Cost Function

```
-log(hө(x)) for y=1
-log(1-hө(x)) for y=0
```

Code

Github Repo

Sources

Science Direct

Towards Data Science