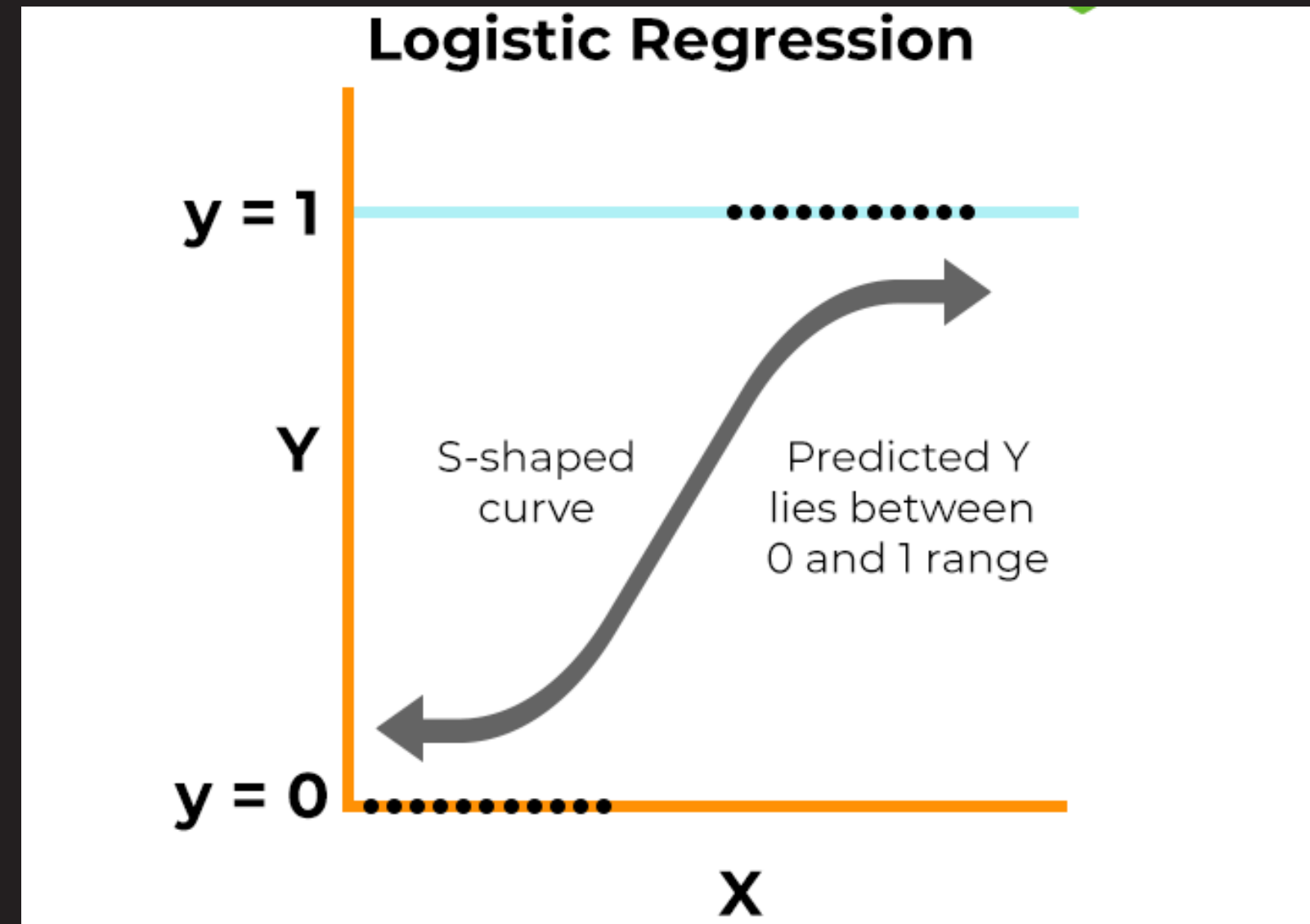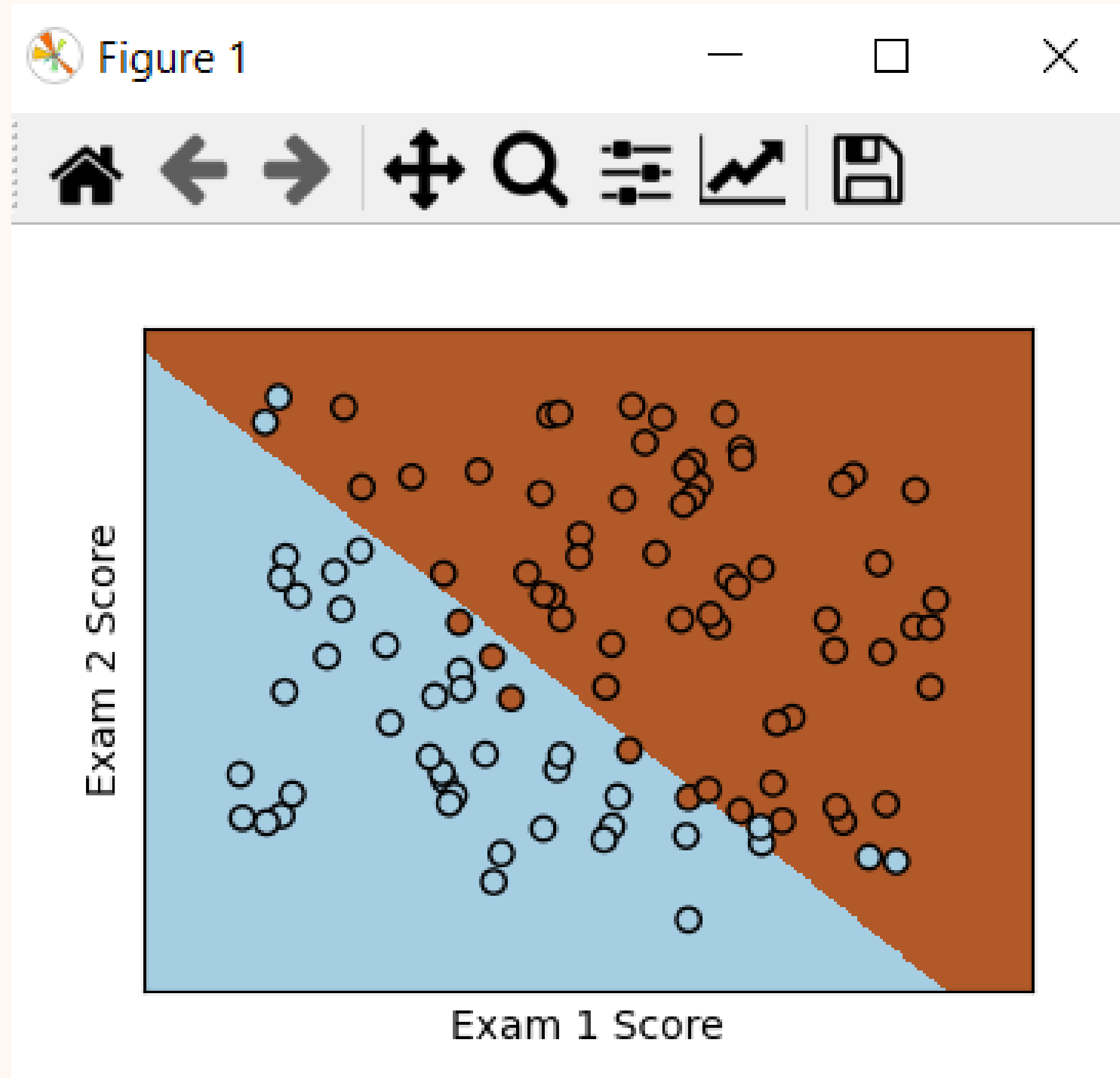# LOGISTIC REGRESSION

20010 1005
YUSUF ÖMER TURSUN

In this assignment I did a simple classification process with the Logistic regression machine learning algorithm

OUTPUT GRAPH

OBSERVATIONS

1 -) This graph shows the classification result I obtained with the logistic regression model. There are two different classes on the graph and each data point belongs to one of these classes. The goal of logistic regression is to identify a decision boundary that separates these two classes as well as possible.

3 -) Looking at the distribution of the data points, I observe that the classes are well separated. Most of the data points in the blue colored region are correctly placed in their class, while the data points in the brown area are similarly positioned in the correct class. This shows that my model has learned the data well and makes a clear distinction between the two classes.

2 -) In the graph, the decision boundary clearly separates two different regions. The blue colored area represents one class and the dark brown area represents the other class. The decision boundary is seen as a straight line between the two regions. This line is the boundary where the model makes the distinction between the two classes and being a linear line is in line with the nature of logistic regression.

4 -) However, in both regions there are some points close to the boundary line. Since these points are close to the decision boundary, they are less precise when classified by the model. In particular, it can be observed that some data points are not in the correct class, suggesting that there may be some errors in the logistic regression model or that the classes are not fully discrete.