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Homework 3

Before starting this homework I studied regression, classification with sigmoid and multi class classification with softmax function. Since I participated the laboratory courses, I rewatched the lab3 and lab4.

A whiteboard with writing on it

Description automatically generated with low confidenceTable

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Description automatically generatedI started with creating the datapoints and their labels. Later I changed the Error function and took derivative of the error function respect to w and w0. I used the hint, that is given in the lectures for derivative of sigmoid function. And by taking the derivative of error function I calculated the gradient function of the w and w0. I only changed the softmax function to sigmoid function and I imagined that holding the w parameter of each class’s sigmoid functions as a (2x3) matrix and for w0 as a (1x3) matrix, which made it easier to calculate

Chart

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Chart, scatter chart

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