

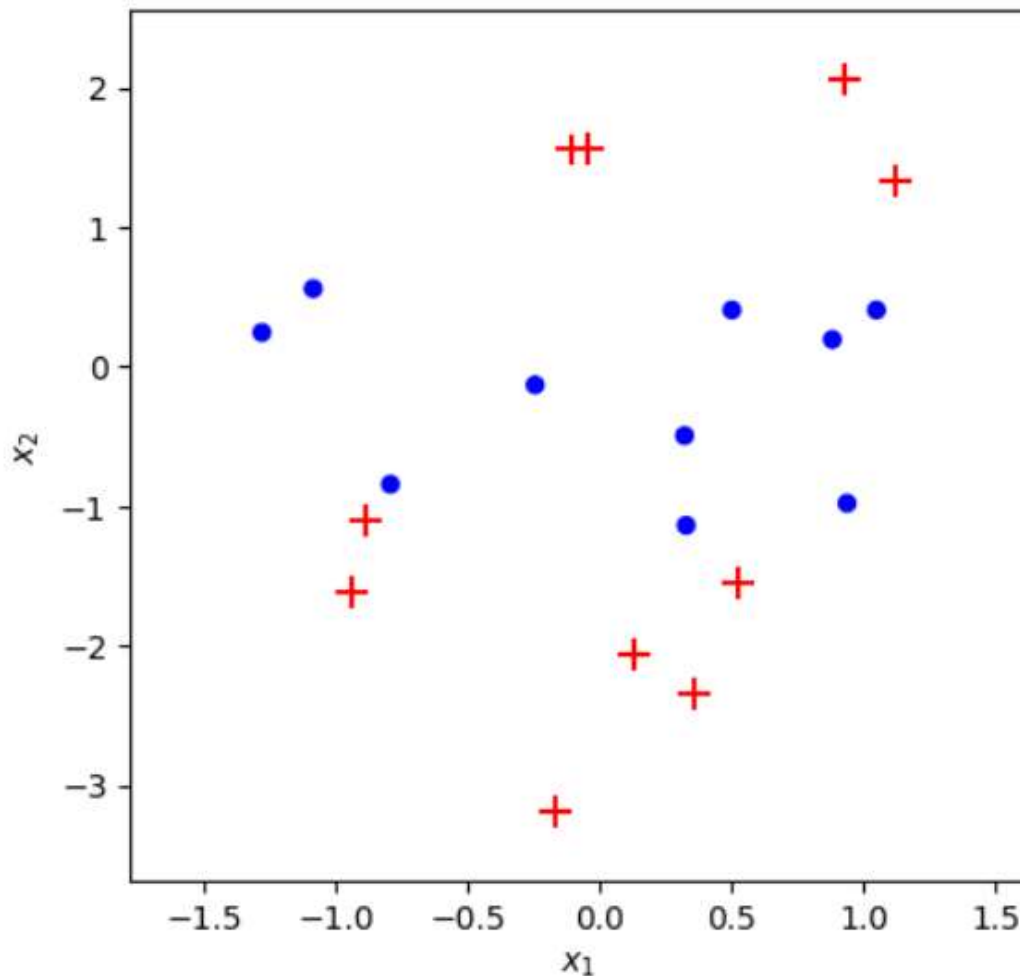
Report for Assignment 4

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Adaboost Classifier

I implemented adaboost classifier by generating a random Gaussian dataset in a limited region of the 2D space. Steps are as follows,

First, I wrote the program for plotting our firstly generated dataset. Which is as follows,



Then I generated a dataset using Gaussian distribution of 20 examples. And, arbitrarily assign binary labels $\{-1, +1\}$ to the examples.

If I change the number of stages of adaboost, we get,

Number of Stages of Adaboost	Train Error
10	0.05
15	0.053
20	0.039
25	0.032

Then I plotted decision boundary for all iterations of Adaboost.

At last we get decision boundary,

