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Exercise 2
Machine Learning

Til Mohr
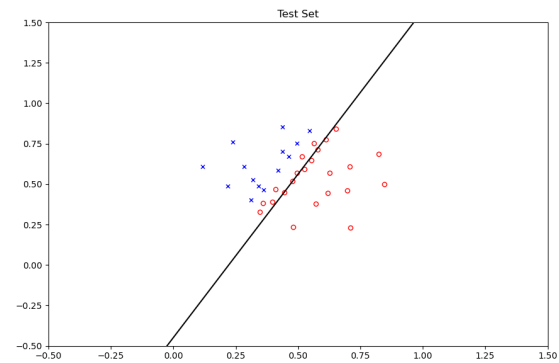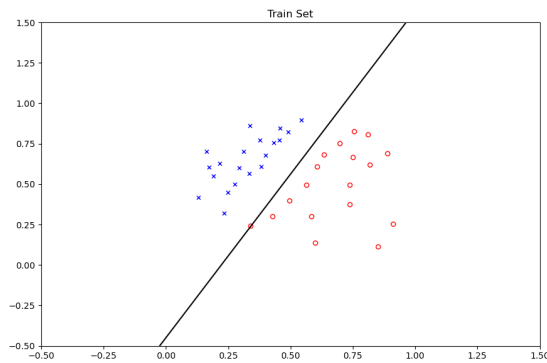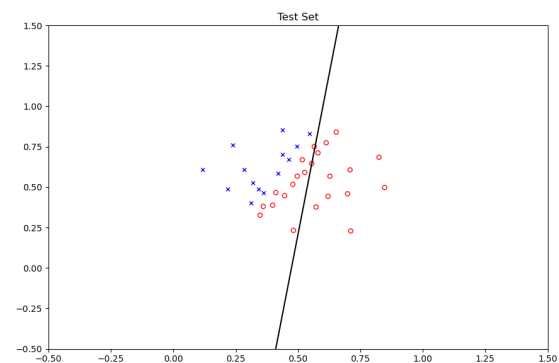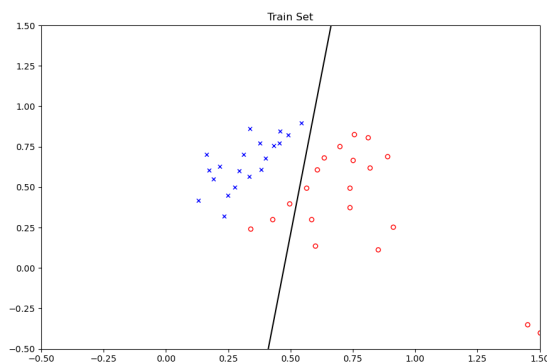Simon Michau
Marc Ludevid Wulf

Question 1

(c)

Accuracy on train set: 0.9736842105263158
Accuracy on test set: 0.7837837837837838

We can see, that not even for the training data the resulting classifier fully classifies the data. Especially, we can see that the margin between classifier and the data of the two categories is not maximal, thus reducing generalization. This is also shown using the test set.

Adding outliers... Accuracy on train set: 0.925
Accuracy on test set: 0.6756756756756757

We can see that adding outliers further disrupts the accuracy of the classifier, which is to be expected with a least-squares classifier as discussed in the lecture.