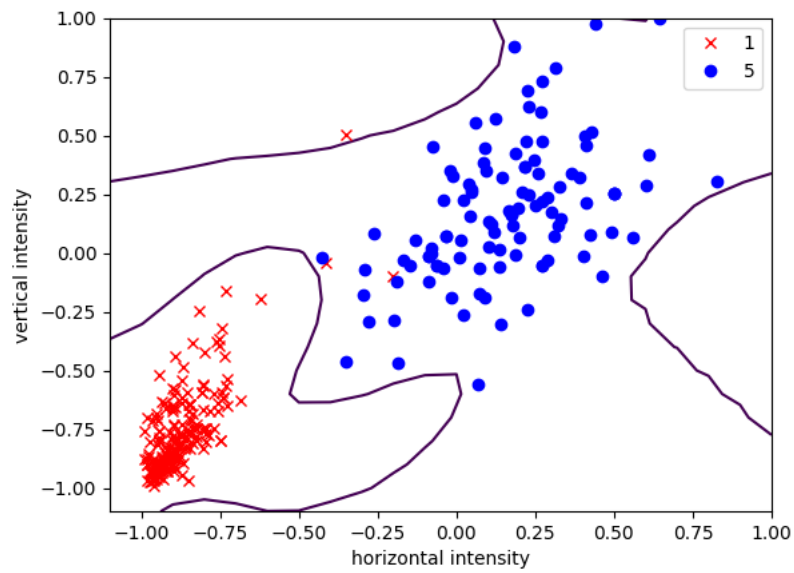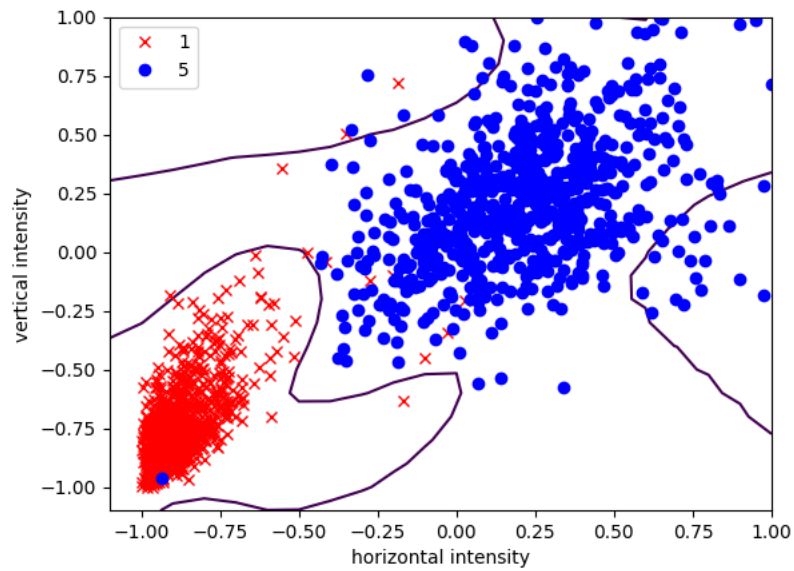1. The dimensions of Z are 45
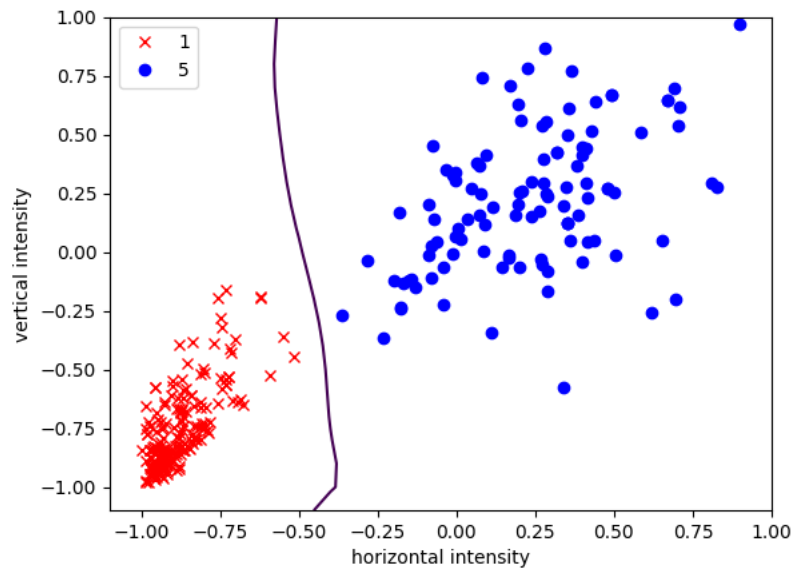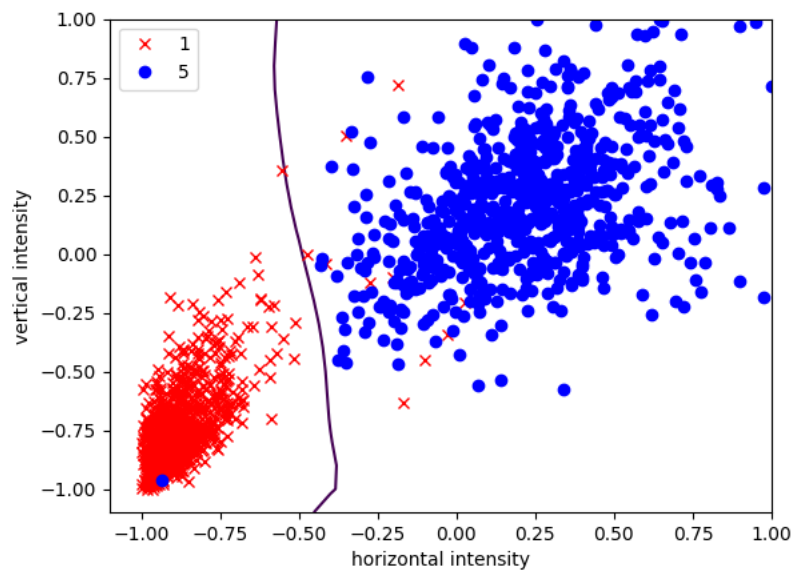
2. training data:

testing data:

The data appears to be **overfitted**

3. training data:

testing data:

Data is regularized, there doesn't appear to be any under or overfitting.