Homework Assignment 2

Programming Exercise 2.5

1. See respective images

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| λ | 0.001 | 0.005 | 0.0075 | 0.01 | 0.05 | 0.075 | 0.1 | 1 |
| Accuracy | 0.6 | 0.56 | 0.78 | 0.7 | 0.74 | 0.58 | 0.6 | 0.52 |

The best regularization constant we found was λ = 0.0075. Reason: see graph. Highest accuracy among all values tested. There is a peak that occurs at around 0.0075. In general, accuracy tends to decrease with increasing lambda.

1. Estimate of accuracy of best classifier: 0.78