Machine Learning 6.867 - Pset 2

October 13, 2015

1 Logistic Regression

1.1 Implementation

We implemented L_2-regularized logistic regression using gradient descent.

1.2 Testing in data with $\lambda = 0$
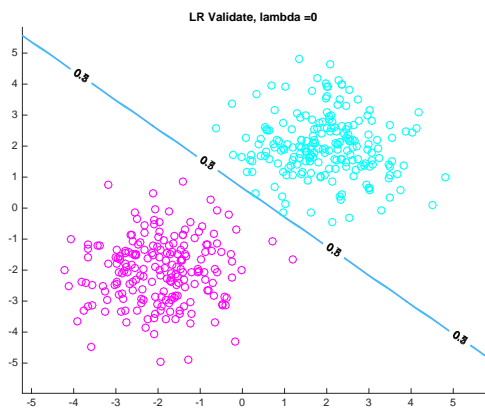
We test the logistic regression

Table 1: Estimated logistic regrecoefficients

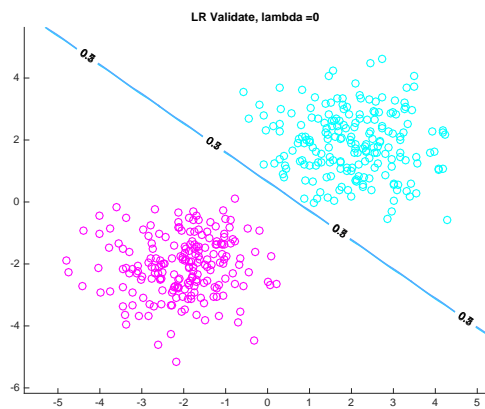| Data	w_0	w_1	w_2
stdev1	-66.3378	95.2461	101.1527
stdev2	-0.0466	0.7636	1.1148
stdev4	-0.0093	0.2363	0.2034
nonsep	0.0006	-0.0247	-0.0237

2 Support Vector Machine
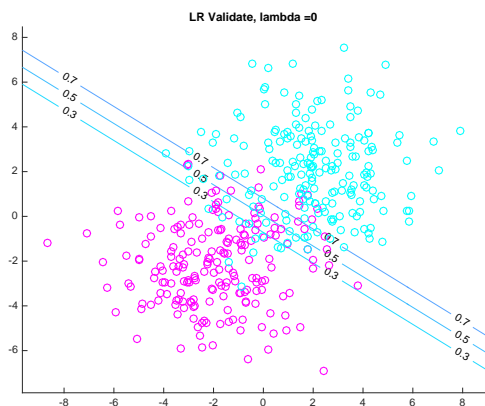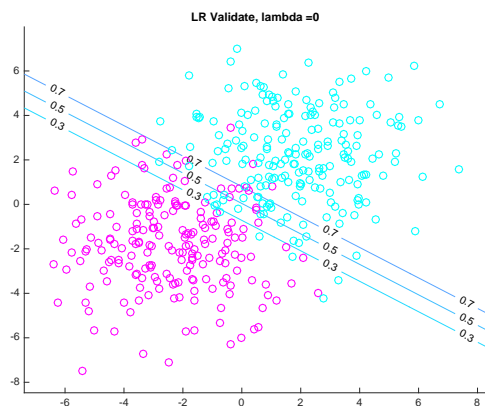
2.1 Implementation

3 Titanic Data

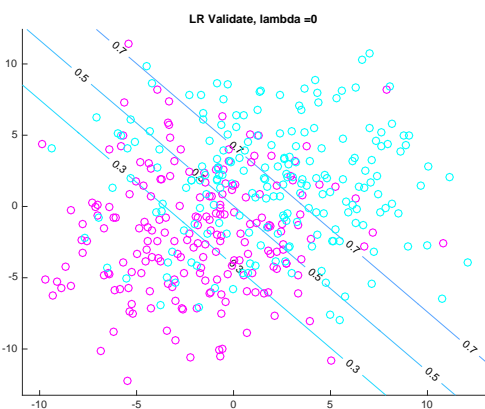(a) Data with $\sigma = 1$, training
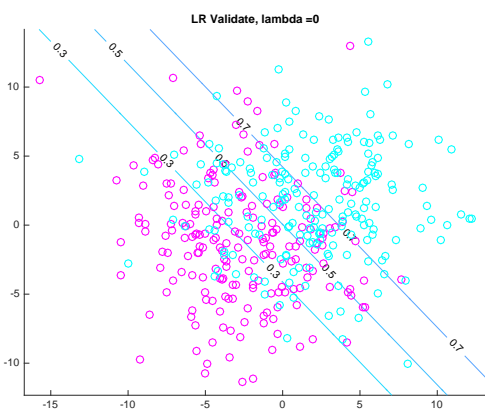
(b) Data with $\sigma = 1$, validation

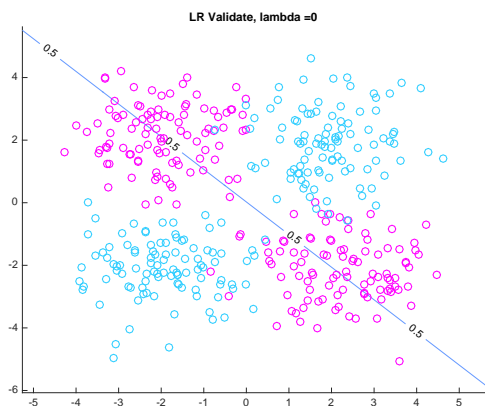(c) CData with $\sigma = 2$, training
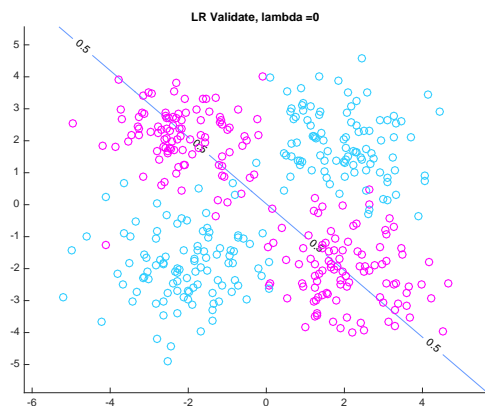
(d) CData with $\sigma = 2$, validation

(e) Data with $\sigma = 4$, training

(f) Data with $\sigma = 4$, validation

(g) Non-seperable data, training

(h) Non-seperable data, validation

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