SVM:

When using Guassian kernel, setting penalty C=1, gamma=1 in the process of cross validation, SVM gives the minimum validation error. And applying this model to testing data, the accuracy is about **88.54%**

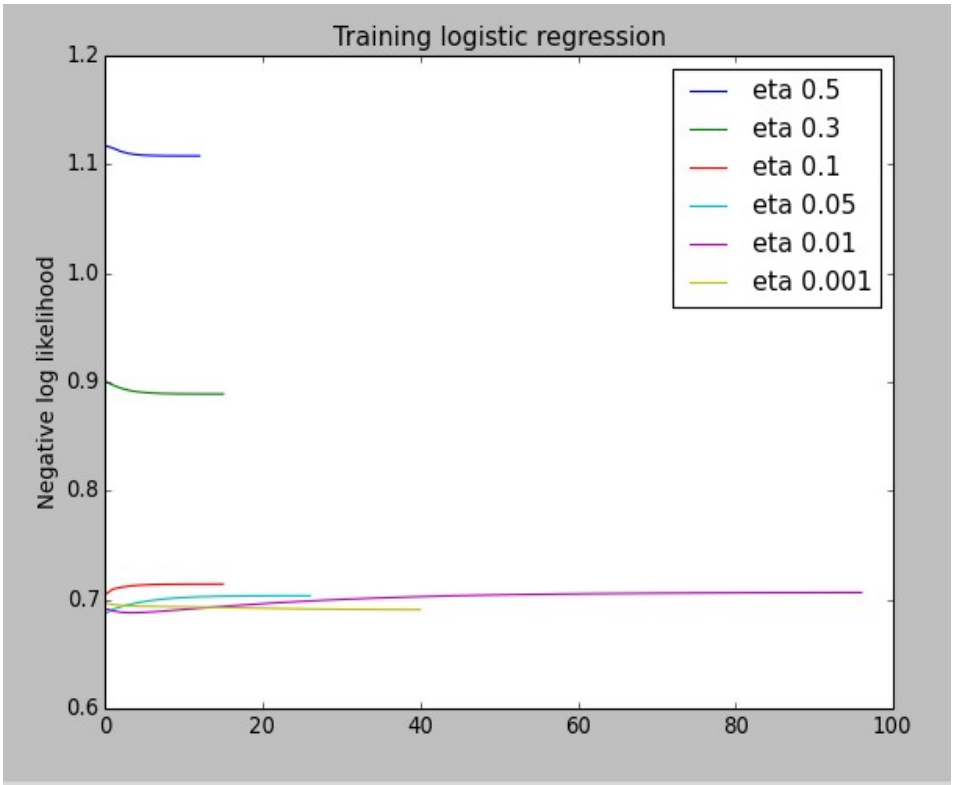
```
Out[33]: SVC(C=1, cache_size=200, class_weight=None, coef0=0.0, degree=3, gamma=1,
           kernel='rbf', max_iter=-1, probability=False, random_state=None,
           shrinking=True, tol=0.001, verbose=False)
```

```
In [35]: clf1.score(test_fea_norm, test_target)

Out[35]: 0.88545816733067728
```

Logistic Regression using Stochastic Gradient Descent:

When setting learning rate as 0.001, it gives the best performance. And the test accuracy is about **60.20%**




```
In [9]: res

Out[9]: 0.6019900497512438
```

Conclusion: SVM works better than LR in this dataset.