

MATH 567: Mathematical Techniques in Data  
Science  
Lab 6

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March 15, 2017

The goal of the exercise today is to implement the one-vs-all approach to classification for logistic regression.

- 1 Review the one-vs-all classification technique in the Week 5 slides.
- 2 Construct a function `one_vs_all_logistic = function(trainY, trainX, testX)` that outputs the “one-vs-all” classifier for logistic regression.

Some useful functions to help you:

- `yvals = unique(trainY)` returns the unique values in `trainY`.
- What does the following command do?

```
train_Y_cpy = factor(ifelse(trainY == yvals[i], 1,0))
```