

Homework 7
Statistical Learning, Spring Term 2019
STAT760

The website for the Statistical Learning book has a repository of data:

<https://web.stanford.edu/~hastie/ElemStatLearn/>

Under the “Data” button we can find several datasets. The prostate cancer data set has eight predictors (columns 1--8) and one outcome (column 9), the lpsa measurement.

Problem 1 (10 points)

- a) Train a two-layer neural network for predicting lpsa.
- b) Train the network using weight decay

Problem 2 (10 points)

The South-African heart disease dataset has 9 attributes and an outcome (coronary heart disease, binary)

For the South-African heart disease

- a) Train a two-layer neural network for predicting heart disease.
- b) Use Xavier weight initialization
- c) Train the network using dropout

In both cases, report the error rate using k-fold cross-validation