

**Biostatistics 546, Spring 2016**  
**Machine Learning for Biomedical Big Data**  
**Homework 5**

*Answer the following questions, in full sentences. Solutions should be word-processed. For problems that include coding, pasting output from your R session is not acceptable, unless otherwise indicated; your goal should be to perform statistical learning and the R output is relevant only if it is incorporated as part of the analysis. Append your R code separately, with comments for your future reference. Please upload your solutions as a .pdf file.*

NOTE: While you can (and are encouraged to) work together, your solution to the homework, including the code and the writeup, should be *your own work*.

The following problems are from Introduction to Statistical Learning, by James et al (2012).

1. Chapter 10, Problem 2
2. Chapter 10, Problem 3
3. Chapter 10, Problem 10; repeat part (b) using MDS with both Euclidean and Manhattan distances. Compare your results with those in (b) and comment on your findings.
4. Chapter 10, Problem 11
5. (*optional*) Chapter 10, Problem 6