

CSCE 587 Homework Assign1

Due: Sept. 14, 2017

Download the data for NFL salaries from 2016 from the class website.

Note: While it is possible to answer some of the questions by looking at the data set, you will lose points if you do not use R commands to answer the questions. **BE SURE TO INCLUDE R CODE TO ANSWER EACH QUESTION.** To make it clear what problem each R code statement solves, include a comment line.

1 Find the subset that earned at least \$1,000,000. Assign those rows to the variable BigBucks.

(a) How many players are in this list?

(b) Draw a histogram of the salaries of the Players in the BigBucks category.

- In order to improve the readability of the histogram, scale the data so that the salaries are in millions of dollars. For example, Flacco earned \$22,550,000. You would depict this as 22.55.
- Of course you need to provide an appropriate label for the x-axis so that it is clear that this is \$ 22.55M and not 90 cents ;-)
- Set the number of bins in the histogram to 5 using the “breaks” parameter. (see ?hist for details)
- Save the plot to a PDF
- Open the PDF file to make sure that you succeeded.

2. Analyze the entire dataset to find out how many players make the lowest salary. Start by finding the minimum salary and the find those players that make that minimum salary.

3. How many millionaires are there?

4. How many players earn more than 10 million?

5. Compare the salaries of the Dallas Cowboys (DAL) to the salaries of the Green Bay Packers. Create two smaller datasets called Cowboys and Packers that contain the data for just these teams.

- What is the total salary for each of these teams?
- What is the largest salary on each team and who makes this amount?
- What is the average salaries on both teams?
- How many millionaires are there on each team?
- Draw a histogram of the salaries of the two teams. Make a PDF of each of these histograms. Give them sensible titles and label the axes.

Graduate Students Only

6. How many different team categories are represented in this data set? Note: There are more categories than actual NFL teams.

Turn in via dropbox:

1. Your R code for all problems
2. A separate PDF for each histogram.