CMPSC 390
Data Analytics
Fall 2017

Lab 3: Introduction to R.
Save this lab assignment to: `labs/lab3`

R has been one of the fastest growing programming languages of the last decade and is ranked #6 in the IEEE Spectrum Top Programming Languages list. Besides its popularity, R is the most recommended language to learn when getting started with data analytics as it is created with statistics and data in mind. In this lab you are invited to

Objectives

To enhance the understanding of the basic R functionality, including the use of R Studio and producing data visualizations.

Reading Assignment

Please read Chapters 1, 2, 4 and 6 in the course book, corresponding to Chapters 3, 4, 6 and 8 in the website (online) version of the book.

Exploring R Programming

As we are not meeting for two of our class sessions (this Friday and next Monday). Although we are not holding our lab this week in person, we will still have our lab work to complete. You are to use the normal class/lab time to complete this lab in a tutorial-like format. This is an individual lab, but you are welcome to discuss the work with your fellow classmates to help you answer the questions that are to be completed.

In this lab you are asked to read the assigned sections of the book and complete all exercises from Sections 1, 2 and 4 of the "R for Data Science" textbook. As you remember, the chapter numbering in the printed version of the book is not the same as the numbering in the online version of the book. This lab's assigned exercises correspond to the following exercises in the online version of the book, found in`http://r4ds.had.co.nz/`.

The questions to answer are the following.

{3.2.4, 3.3.1, 3.5.1, 3.6.1, 3.7.1, 3.8.1, 3.9.1, 4.4, 6.3}

Note: For the question 6.3.1, where a tip is adopted from Twitter, please give the tip and then explain how it is useful to you.

Important Details

Lab directory structure: Make sure you have placed your submission materials for this lab into `labs/lab3` directory in your Bitbucket repository (`cs390f2017-billb`).

Submission Information Your answers to the assigned questions are to be typed up using a word processor such as LibreOffice or using LaTeX. Your are to submit your document to the instructor using your Bitbucket repository.

Note: Please remember to include your name on everything you submit for the class. Although the instructor collects your work from Bitbucket, each work must be graded outside of the Bitbucket directory and so without adding your name, the instructor will be unable to award you credit for your work.

Required Deliverables

Submit electronic versions of the following deliverable through your Bitbucket repository (`cs390f2017-billb`) by correctly using using appropriate Git commands, such as `git add`, `git commit -m ‘‘your message’’` and `git push`. When you have finished, please ensure that the Bitbucket Web site has your pushed work. Please contact the instructor if you have any questions about assignment submission.

1. Your answers to the assigned exercises.