Task 1: Introduction/Installing Software

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June 9, 2016

In this module, we'll give an overview to the larger assignment and a gentle introduction to R/Rstudio.

Motivation

The LACE score is a summary score used in clinical data that is derived from 4 key clinical data elements in order to predict the probability of 30-day readmissions. Here are the individual elements of the LACE score:

- L = Length of stay
- A = acuity of admission
- C = Comorbidities (scored by severity, and additive)
- E = Number of Emergency room admits 6 months prior to admission

In class on-campus, we will calculate each of these elements. Added together, the LACE score ranges from 1-14 and provides

Your overall goal in the pre-work will be to identify those cases in the dataset that are readmissions within a 30 day period. These are the cases for which we will then calculate the LACE score (in-class, on-campus) and examine how well it predicts readmissions.

Installing Software

Your goal this week will be to install two pieces of software that we'll use for analysis: R and Rstudio. Once you've installed it, we'll take a look at the interface, load in a built-in dataset, and do some simple summary statistics.

The first thing to do is to install R. Go to https://cran.r-project.org and download the appropriate binary for your system. If you are on a linux system and there is not a previously compiled binary for your distribution, you will need to install it with a package manager, such as `apt-get`. R is the statistical language that we are going to do all of our work in.

Secondly, we will install Rstudio. Rstudio is what's called an Integrative Development Environment (IDE), which will make working with R much easier.

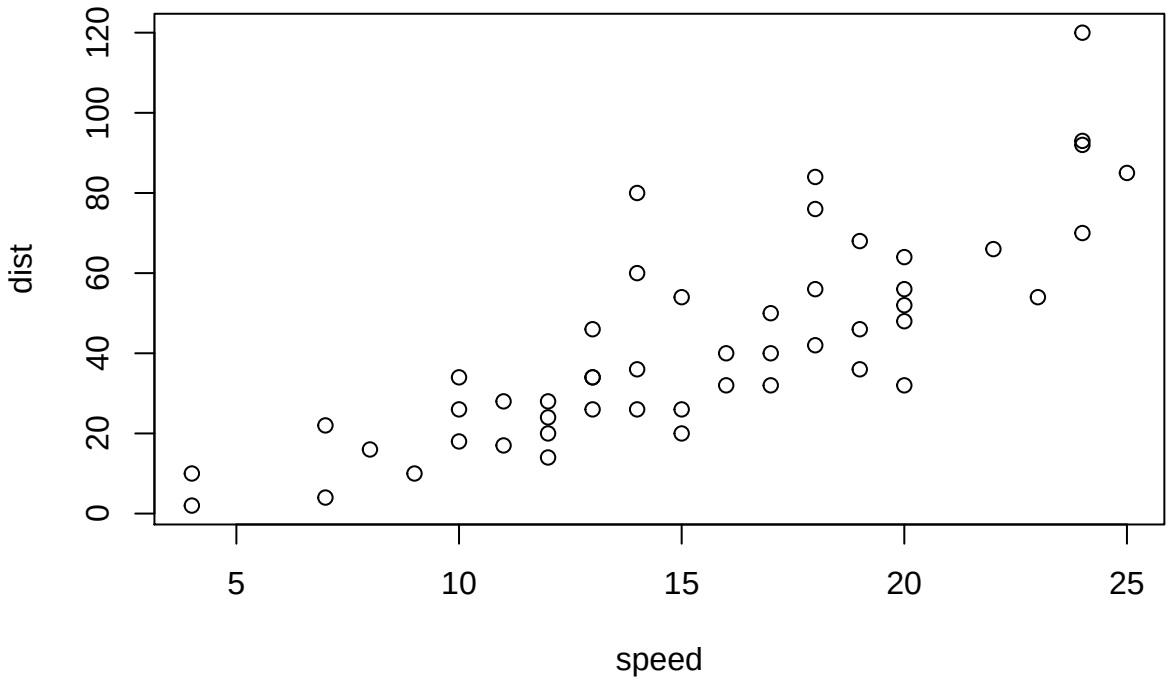
Loading a built-in dataset and

Completing your assignment

```
summary(cars)
```

```
##      speed           dist       
##  Min.   : 4.0   Min.   :  2.00  
##  1st Qu.:12.0   1st Qu.: 26.00  
##  Median :15.0   Median : 36.00  
##  Mean   :15.4   Mean   : 42.98  
##  3rd Qu.:19.0   3rd Qu.: 56.00  
##  Max.   :25.0   Max.   :120.00
```

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.