

ANALYSIS^{WITH}PROGRAMMING

cout << "let's do some analysis and programming" << endl;

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IMPORTING DATA *R Programming*

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There are number of ways in importing data into R, and several formats are available,

- From Excel to R;
- from SPSS to R; and,
- from Stata to R, and more here.

In this post, we are going to talk about importing common data format that we often encounter, such as Excel and Text data. Most of the data are saved in MS Excel, and the best way to import this is to save this in CSV format, below is the procedure:

- Open your Excel data;
- go to **File > Save As** or press **Ctrl+Shift+S**;
- name this with anything you want, say "Data". Then before clicking **Save**, make sure to change the **File Format** to *Comma Delimited Text* and better set the directory to **My Documents** folder, for Windows;
- when saved, this file will have a name "Data.csv".

Now open R, and run the following

```
> MyRData <- read.csv("Data.csv", header = TRUE)
```

The argument **header = TRUE** tells R that the first row of the data are the labels of every column. If set to **FALSE**, means the first row of the data are not the labels, but are considered as data points.

Now in some cases, data are saved in Text (.txt) format. And to import this, we use the **read.table** function. Consider the data below, and say this is saved as **Data1.txt** in **My Documents** folder (for Windows).

College	Prof	Asct.Prof	Asst.Prof	Ins
CASS	30	21	23	19
CBAA	6	6	8	2
CED	15	12	13	14
COE	16	10	8	9
CON	0	1	9	12
CSM	45	36	28	15

IDS	6	6	10	9
SCS	4	10	11	10
SET	23	11	8	11

To import this to R, simply run,

```
> MyRData2 <- read.table("Data1.txt", header = TRUE)
```

Or apply `read.table` directly to the data

```
> MyRData3 <- read.table(header = TRUE,
  text = "College    Prof    Asct.Prof    Asst.Prof    Ins
         CASS      30      21        23        19
         CBAA       6       6         8         2
         CED       15      12        13        14
         COE       16      10         8         9
         CON        0       1         9        12
         CSM       45      36        28        15
         IDS        6       6        10         9
         SCS        4      10        11        10
         SET       23      11         8        11")
```

There are times, however, when the Text data are saved in the internet, here is an example. To import this to R, of course, make sure of the internet connection first. Next, copy the URL of the data and assign this to any variable name, then apply `read.table`. Try the codes below,

```
> library(RCurl)
> web <- "https://raw.githubusercontent.com/alstat/
  Analysis-with-Programming/master/2013/R/
  How%20to%20Enter%20Your%20Data/Data.dat"
> x <- getURL(web)
> y <- read.table(text = x, header = TRUE)
```

OUTPUT

id	Code	S3	S2	S1	S1.1	S2.1	S3.1	Weight.class
1	Slope1	6	4	2	NA	NA	NA	NA
2	Slope2	16	8	4	NA	NA	NA	NA
3	Slope3	30	16	8	NA	NA	NA	NA
4	Flood	2	1	1	NA	NA	NA	NA
5	Drainage	3	3	2	NA	NA	NA	NA

Labels

R, Tutorial,