1 INSTALLING R AND R COMMANDER (Windows)

1.1 Installing R (Current version is 3.5.1 as of 2018-07-19)

NOTE 1: **The instructions below are for Windows installation**. To install R for Mac OS X, visit < `https://cran.r-project.org/bin/macosx/` > and also my web page < `http://profs.degroote.mcmaster.ca/ads/parlar/index.html` > (instructions just under my picture).

NOTE 2: In some Windows operating systems, the R X64 3.5.1 icon appears in the "START MENU" (lower left corner of the screen). If you right-click on this icon, you can "PIN IT TO START MENU" or "PIN IT TO TASKBAR" for future quick access.

Alternatively, if you prefer to see a desktop icon, do the following: In the "SELECT ADDITIONAL TASKS" window during installation, choose "CREATE A DESKTOP SHORTCUT."

- Uninstall earlier versions of R and delete all R library folders under Program Files or R folder (if applicable)

- Close all other programs

- Go to

    - `http://www.r-project.org/`

- Click

    - `download R`

- Among **CRAN mirrors**, for me, the 0-Cloud link below works well

    - `https://cloud.r-project.org/`

- Click

    - `Download R for Windows`

- Click

    - `install R for the first time`

- Click

    - `Download R 3.5.1 for Windows` (62 megabytes, 32/64 bit)

    and save the file (which will go to your Downloads folder)

- **IMPORTANT**: Install the program to C: drive, not to the default folder.

- When installing, unselect 32-bit Files (if you have Windows 7 or above) and choose

    - `Yes (customized startup)`

    and then choose

    - `SDI (separate windows)`

    This above step is important for running Rcmdr smoothly.

    Next,

    - `HTML help`
    - As I mentioned above, if you want to see a desktop icon of R, do the following: In the "Select Additional Tasks" window, choose "Create a desktop shortcut."

- Start R from the icon on the desktop (or the Start Menu).

- **You will now need to update packages.**

- Choose

    - `Packages > Update packages`

    and select

    - `0-Cloud [https]` (Or, any other site you prefer).

    Follow the instructions to update packages

1.2 Installing R Commander (Current version is 2.4-4 as of 2018-07-19)

NOTE: **The instructions below are for Windows installation**. To install R Commander for Mac OS X, visit `http://socserv.mcmaster.ca/jfox/Misc/Rcmdr/installation-notes.html`.

- Exit R (if it is open) and start R[1]

- The easiest way to install the Rcmdr package is via the command

    - `install.packages("Rcmdr")`

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[1]Note: If you wish to load the R Commander automatically when R starts up, you can add the following to the Rprofile.site file in R's 'etc' directory: (Use this with care as it may not work on some computers.)

```
local({
old <- getOption("defaultPackages")
options(defaultPackages = c(old, "Rcmdr"))
})
```

This will unpack about 30 or so packages.

- When you *first* load the Rcmdr package with the command

  - `library(Rcmdr)`

  it will offer to download and install missing dependencies (with a **terrible noise!**); allow it to do so. (It will, by default, install packages from CRAN.)

- Exit Commander and R.

- Next time you start R, just choose

  - `Packages > Load Package > RCmdr`.
  - Or, you can still enter `library(Rcmdr)` to start Rcmdr

  This will start the R Commander window and you can start using it now.

- Periodically you should choose

  - `Packages > Update Packages`.

- Additional help is available here:

  - `http://socserv.mcmaster.ca/jfox/Misc/Rcmdr/`

2 INSTALLING OTHER USEFUL PACKAGES (Windows) — Optional

2.1 "Using R" by Verzani

- Install `UsingR` from R by typing

  - `install.packages("UsingR",dependencies=TRUE)`

  or from R,

  - Packages > Install Package(s)...

- Once installed, you can load it from R by

  - `library(UsingR)`,

  or from Rcmdr by

  - Tools > Load Package(s)...

This package is useful for plotting confidence and prediction bands, and providing predictions by, e.g., from the `Table3.1Sales-Advertising.csv` file:

simple.lm(Dataset$ADVT,Dataset$SALES,show.residuals=TRUE,show.ci=TRUE,pred=c(9,10,11))[2]

2.2 corrplot (Correlation Plot)

- Install `corrplot` package from R first by

    - Packages > Install Package(s)...

- After installing `corrplot` for the first time from R, load it from R by

    - Packages > Load package...

  or by

    - `library(corrplot)`

  or from Rcmdr by

    - Tools > Load Package(s)...

- Then generate the `corrmatrix` using Rcmdr by Statistics > Summaries > Correlation matrix...

- Basically, we do this:

    - Rcmdr produces a command `cor(Some R commands)`. Write it as,
    - M <- `cor(Some R commands)` # Just call it M now
    - `corrplot(M, method = "ellipse")`

- Also possible are the commands,

    - `corrplot(M, method = "number")`
    - `corrplot(M, order = "FPC",method="ellipse")` # This orders them, nice!

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[2]Usage

simple.lm(x, y, show.residuals=FALSE, show.ci=FALSE, conf.level=0.95,pred=)

Arguments

x The predictor variable

y The response variable

show.residuals set to TRUE to plot residuals

show.ci set to TRUE to plot confidence intervals

conf.level if show.ci=TRUE will plot these CI's at this level

pred values of the x-variable for prediction, in the form pred=c(a,b,c)