Module 1 - Lesson 05

Getting Started – R and RStudio

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Lesson 05 …

Getting Started with

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- https://www.r-project.org/
- https://cran.r-project.org/

R is a language and environment for statistical computing and graphics. It is a GNU project which is similar to the S language and environment which was developed at Bell Laboratories (formerly AT&T, now Lucent Technologies) by John Chambers and colleagues. R can be considered as a different implementation of S. There are some important differences, but much code written for S runs unaltered under R.

R is available as Free Software under the terms of the Free Software Foundation's GNU General Public License in source code form. It compiles and runs on a wide variety of UNIX platforms and similar systems (including FreeBSD and Linux), Windows and MacOS.

STEP 1: Download and Install R

1. Download R for your operating system: Windows, Mac OS X or Linux https://cran.r-project.org/ - specific information and installation instructions are provided for each operating system.

2. Once installed, run R and make sure it is working. For example try a few commands, such as `2+2` or computing the mean of an array of numbers `mean(c(1,2,3,4,5))`.

```
> 2 + 2
> 2+2
[1] 4
> mean(c(1,2,3,4,5))
[1] 3
```

- https://www.rstudio.com/products/rstudio/

RStudio is an integrated development environment (IDE) for R. It includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging and workspace management.

RStudio is available in open source and commercial editions and runs on the desktop (Windows, Mac, and Linux) or in a browser connected to RStudio Server or RStudio Server Pro (Debian/Ubuntu, RedHat/CentOS, and SUSE Linux).

STEP 2: Download and Install RStudio

1. Download RStudio Desktop (open source license - FREE) from https://www.rstudio.com/products/rstudio/download/ - (scroll down) choose the "Installer" for your operating system (Windows/Vista; Mac OS X; Linux Ubuntu Debian, Fedora/Redhat/openSUSE).

2. Once installed, run RStudio and check to make sure it is linked to your R installation (which is why you install R first).

3. Let's explore the RStudio interface; basic layout; menus and options

Resources for Learning More About R

- RStudio
  - Webinars https://www.rstudio.com/resources/webinars/
  - Online Learning https://www.rstudio.com/online-learning/
  - External training https://www.rstudio.com/instructors/
- TryR - CodeSchool http://tryr.codeschool.com/
- SwiRl http://swirlstats.com/
- R-bloggers - Learn R https://www.r-bloggers.com/how-to-learn-r-2/

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Github