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**Resources for introducing yourself to R and R Studio**

**14/02/2017**

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# Getting Started

Before getting started with R the obvious thing you need to do first is to install it! It can be downloaded from <http://cran.r-project.org/>.Updated versions are released fairly regularly, so even if you have already have R installed on your computer it is worth checking that that you are working with the most up to date version.

We also strongly recommend that you also install another program called RStudio which can be used to make working with R much easier. This can downloaded for free from: <http://www.rstudio.com/> .

Once you have finished installing R and RStudio you are (hopefully!) ready to start learning how to use it. As when learning any new skill it is important to be patient and to be persistent if you find you are struggling. Do not expect to become an expert simply by reading through the material – practicing the techniques by yourself is the most important step towards understanding.

# Free Online Introductory Courses

We would recommend the following free online courses as a starting point for getting to grips with the basics of analysis in R:

* **Open Intro**

<http://www.openintro.org/stat/labs.php>

The material here is presented as an introductory course in statistics, but all of the examples are illustrated using R syntax and R output. This material should give you a recap of a lot of statistics you have learnt previously, as well as possibly extending into some new areas, whilst familiarising yourself with how to do these statistics in R.

* **Code School**

<http://tryr.codeschool.com>

This course is more focused on learning the syntax and data structures of R and will help you to gain more understanding

* **Marin Stats Lectures**

<http://www.youtube.com/user/marinstatlectures>

A well-presented series of video tutorials which covers similar topics to both of the two courses listed above, but without the hands-on examples. In particular the “Getting Started with R” series of videos may be very useful if you are having problems with the installation or configuration of RStudio.

* **Swirl**

<http://swirlstats.com/students.html>

Learn R from within R! There are a series of interactive courses which guide you through various aspects of R and statistics. Around 10 courses are currently available, each course split into 10-15 short modules.

This list is not exhaustive – there are many other free R resources available online; if you find something else that you like then please let us know!

# Alternatives

If you find you do not like these courses there are many other alternatives available online which you could find from a simple Google search. However we have highlighted these three courses in particular because:

* They do not assume in depth prior knowledge of either statistics or programming, only that you are willing to learn. A large number of other ‘Introduction to R’ courses are either aimed at statisticians moving to R from another statistical software package or for programmers moving to R from another programming language.
* All of the material covered in these courses is important to understand if you want to be able to analyse your own data in R and be able to interpret and output the results
* The material is well presented and makes an effort to clearly define any jargon which may not be familiar to you
* They are completely free to access

# Taking Things Further

Once you have worked through these introductory courses you will be in a position to start exploring how to conduct more complex analysis methods, which may be more directly relevant to your project. However it is important to make sure you are comfortable with the basics before diving into the more advanced material.

We would then recommend taking a look at these websites if you want to start looking at more analysis methods (multi-factor ANOVA, repeated measures, logistic regression,…):

* **Quick-R**

<http://www.statmethods.net/>

A series of concise examples which cover a wide range of analysis methods. If you are simply looking for the syntax to conduct a particular analysis then this is a good place to look.

* **R-Tutorials, Costal Carolina University**

<http://ww2.coastal.edu/kingw/statistics/R-tutorials/>

More in-depth tutorials covering a similar range of useful intermediate level statistical analysis

* **Institute for Digital Research and Education: R**

<http://www.ats.ucla.edu/stat/r/>

Lots of R resources with range ranging from general overviews up to detailed tutorials for more complex analysis methods.

**Written by**

Sam Dumble

**for the Title of Resource Pack (delete if stand-alone resource)**

In conjunction with the Statistical Services Centre, University of Reading, 14/02/2017





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