**Introduction to RStudio**

To prepare you for the workshop, I have included an R script called “BasicRCommands.R” for you to work through. You should open this script with RStudio and run it line by line, reading the comments as you go.

Some notes to get you started:

**RStudio:**

There are a few ways of running the R programming language. If you just open R itself, you will see a basic command line interface. You can also use RStudio to run R – this is a nicer interface with some extra tools. We will be using RStudio for the workshop.

**Scripts:**

To get things done in R you need to enter commands – instructions that tell R what to do. You can type these commands one at a time into the console, or you can write scripts. A script is just a list of commands that you want R to run one after another. The great thing about scripts is that you can save them and then run them again later, which gives you a record of everything you’ve done and saves you time if you’ll be running the process multiple times.

You open a script like any other file – either by opening RStudio and then clicking File>Open File, or by navigating to the folder that contains your script and either double-clicking it or using right click>open with>RStudio (depending on what the default program for opening R scripts is on your computer).

Here I have opened “BasicRCommands.R”: you can see it in the top left window. Beneath that is the Console window. This is where you can manually type commands, and also where you will see any printed output. In the top right is the Environment, which contains any objects (variables, dataframes, etc) that you have created. In the bottom right you can find the Help window.



To run commands from a script, select the section that you would like to run and click the “Run” button (or press Command+Enter on a Mac, Ctrl+Enter on Windows). You can select a section of the script by highlighting it. If nothing is highlighted then R will run the line of code which currently contains the vertical cursor (i.e. wherever you last clicked in the script).

Comments are marked with a # at the start of the line – R will ignore these lines, so you can write whatever you want in them.

**Creating and viewing objects**

Some commands will create new objects (variables, dataframes, etc). Once these objects have been created you can use them in other commands. You can see a list of the current objects in your working environment in the “Environment” window. If an object contains multiple variables then you will see a drop-down arrow that will show you these variables.



If you click any of the objects under the “Data” heading in the Environment window, you will be able to see this data in spreadsheet form. The data will open in a new tab in the same area of the interface as R scripts – just click to move between or close tabs. You can also look at objects in this way by using the function View().