Learning some R

A gentle Introduction

R is a statistical language that was made by statisticians for statisticians.

# Datatypes in R

There are 5 main datatypes in R:

1. Character
2. Complex
3. Integer
4. Logical
5. Numeric
   1. Real
   2. Decimal

# Assignment of an operator in R

In R the assignment operator can be alpha numerical and can contain one underscore `\_` and one period `. ` . They must start with a letter or a period.

To declare a variable instead of using `=` we must use `<-` operator. Please see the example below.

X <- 50

# Methods in R

Methods just like in other programming languages are built in operations (functions) that we can use in our code to avoid repetition among several other benefits.

We can list all variables in our workspace using ls().

We can also remove the variables that are made in the current space using the rm() function.

# Functions in R

Essentially everything in R is done through functions. Function is a block of code that is made to do a specific task it can take in parameters and can return a value if defined.

The following is syntax of function definition in R.

function (arglist) {body}

# Strings

Strings in R are defined in the same manner as python enclosed in a single quote or double quote.

To write strings there are several ways:-

1. Using cat() : This method prints out the string mentioned in the function on R console.
2. Using print() : print function in R is similar to print function in python it also prints out the string mentioned inside the function on console.

The main difference between these 2 functions is cat return a NULL object while print returns a character vector.

# Vectors in R

A vector is a basic data structure in R. It has element of same type in each index and have fixed length.

The datatypes inside a vector can be:-

* Logical
* Integer
* Numeric
* Character
* Complex

A vector’s datatype can be checked through typeof() function & length can be checked through length() function.

# Importing Data in R

There are many options for importing data in R. we can import it using the dataset function and many other functions as well. Please refer to script `data\_import.r`

# Plotting in R

Plot function allows us to plot in R. R is super intelligent in itself as it can automatically detect quantitative and qualitative data and can determine the plot type accordingly.

For example, for numeric v/s numeric it will be scatter plot, for numeric v/s labelled it will be a bar graph.

# Packages in R

Packages are commonly used in R.

Package contains a collection of R functions, data and compiled code in a defined form.

There are 1000s of packages in R to learn from…..