Getting started with R

Short version

A short version of recommendations to get started and familiar with R:

- "Hands-On Programming with R" (free ebook).
- The R cheat sheet is quite handy to have.

Longer version

Here's a longer list of recommendations for getting started with R if you prefer multiple sources to pick and choose from:

- As far as a "solid introductory courses/guide":
  - "Hands-On Programming with R" from above is possibly the best starting point that involves explanations as well as code you can run to get comfortable/familiar with R.
  - "R for data science" (free ebook) authored by Hadley Wickam who is the biggest name in R these days – he wrote the `ggplot2` and `dplyr` packages of the "`tidyverse`". This book is probably past an "introduction" level and more of a deeper dive once you're more comfortable with R.
  - "An Introduction to R" is a pretty handy webpage to work through for a bit-longer-than-a-typical-introduction introduction. The original version was written by Bill Venables. The introduction provides a general understanding of what R is and how it works.
  - There are built-in tutorials in RStudio (see screenshot below) that are useful.

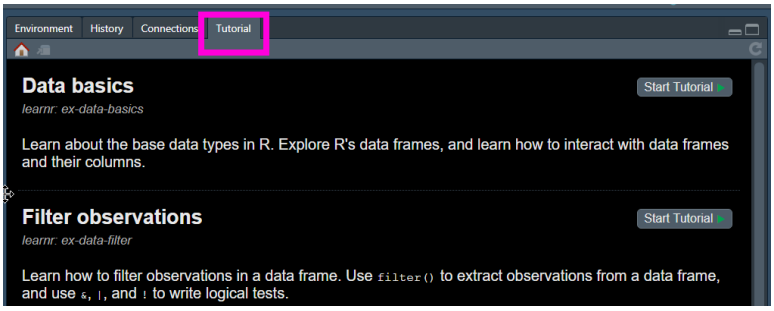

Figure 1: `Environment`/`History`/`Tutorial` tabs in RStudio

Additional resources

(Ignore as you see fit!)

- I always recommend the https://www.r-bloggers.com mailing list. They are an aggregator of R blogs on the web and I find it is a great way to stay up to date with R developments and learn new analysis techniques. Obviously not all articles are relevant (and even reading the headlines allows you to be aware of things should they become useful later on).
- UCLA's stats department has some excellent *data analysis examples* here and here. These are particularly useful if you are used to using SAS, Stata or SPSS as the examples all have the same analysis performed in each of R, SAS, Stata and SPSS.

- Task Views which cover the areas of maths and statistics you may need packages for doing more specific/advanced statistics things. It is maintained by a panel of experts for each topic and gives good little summaries of the packages that perform these tasks as well.

Intermediate to advanced recommendations

- "Advanced R" by Hadley Wickham is a (free e-)book detailing many elements of R that are not taught initially (or at all) in a very accessible way.
- Depending on your mathematical inclination: "Intro to Statistical Learning" is the precursor to my favourite book (the similarly named The Elements of Statistical Learning) and is available as free pdf. It could also be equally called "Intro to machine learning (with examples in R)". It is written by some famous statisticians (in a relative sense to other statisticians!).
- "R Language Definition". Certainly not necessary for someone starting out in R but I find I use it a lot for understanding the underlying structure of R code when things go wrong.

Ty Stanford

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