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Getting Help In R

Tips & Tricks For Getting Work Done

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Sometimes this is what learning R feels like…

Actually, I see it as part of my job to inflict R on people who are perfectly happy to have never heard of it. Happiness doesn't equal proficient and efficient. In some cases the proficiency of a person serves a greater good than their momentary happiness.
-- Patrick Burns R-help (April 2005)
Fortune(108)

...Five resources to avoid having R *inflicted* on you

1. Basic knowledge – R comes shipped with 7 manuals
   - http://cran.r-project.org/manuals.html

2. Industry specific knowledge – CRAN Task Views
   - http://cran.r-project.org/web/views/

3. New Information in the R Universe – CRANberries & R-Bloggers
   - http://dirk.eddelbuettel.com/cranberries/
   - http://www.r-bloggers.com/

4. Academic slant on learning R – UCLA Institute For Digital Research & Education
   - http://www.ats.ucla.edu/stat/r/

5. Interactive R Learning – StackOverflow
   - http://stackoverflow.com/questions/tagged/r
   - http://stats.stackexchange.com/questions/tagged/r

Getting help within R itself

1. Need help on a specific function?
   - R's built in function `help("functionName")` or `?functionName`
     - `?mean`

2. Don't *really* know what you're searching for?
   - R supports "fuzzy" searching via `help.search("your topic")` or `?? "your topic"`
     - `??"factor analysis"`

3. Still not able to find what you're looking for?
   - R package 'sos' searches the R site search website and returns results in a `data.frame()`
     - `library(sos); findFn("spline")`

4. Need help with a specific package?
   - Some package authors have generated "vignettes" which are basically supplemental documentation which typically show more detailed examples about the package
     - `vignette(all = TRUE)`

How to convince others to help you

- Make it easy for them to help you!
- Ok, great – so what does that *actually* mean?
- Characteristics of good questions*:
  - Demonstrates at least a modicum of effort on your behalf
  - Boils the problem down to the crux of the issue, avoid unnecessary information & code
  - Uses plain English to describe your problem
  - Provides the expected output
  - Is reproducible by others

*Thoughts borrowed heavily from here and here.

Make your questions reproducible (self contained)

- Include any packages that need to be loaded
  - `library(foo); require(foo)`

- Include data
  - Use `dput()` to create a text representation of your data that R understands

```
> dput(head(mtcars,3))
yourDataForHelp <- structure(list(mpg = c(21, 21, 22.8), cyl = c(6, 6, 4), disp
= c(160, 160, 108), hp = c(110, 110, 93), drat = c(3.9, 3.9, 3.85), wt = c(2.62,
2.875, 2.32), qsec = c(16.46, 17.02, 18.61), vs = c(0, 0, 1), am = c(1, 1, 1),
gear = c(4, 4, 4), carb = c(4, 4, 1)), .Names = c("mpg", "cyl", "disp", "hp",
"drat", "wt", "qsec", "vs", "am", "gear", "carb"), row.names = c("Mazda RX4",
"Mazda RX4 Wag", "Datsun 710" ), class = "data.frame")
```

  - Create a random data set that ***represents*** your data

```
#Create a random dataset; use str() to inspect real data for your data types
dat <- data.frame(y = rnorm(3), x1 = runif(3), x2 = c("a", "b", "c"))
```

  - Use a built in dataset, list all available with `data()`
  - Use an external hosting website (be considerate of client confidentiality)
    - http://pastebin.com/, use the “raw” feature
    - https://gist.github.com/

  - Include your `sessionInfo()`

For some entertainment, see this poor example followed by this good example.

Questions?

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