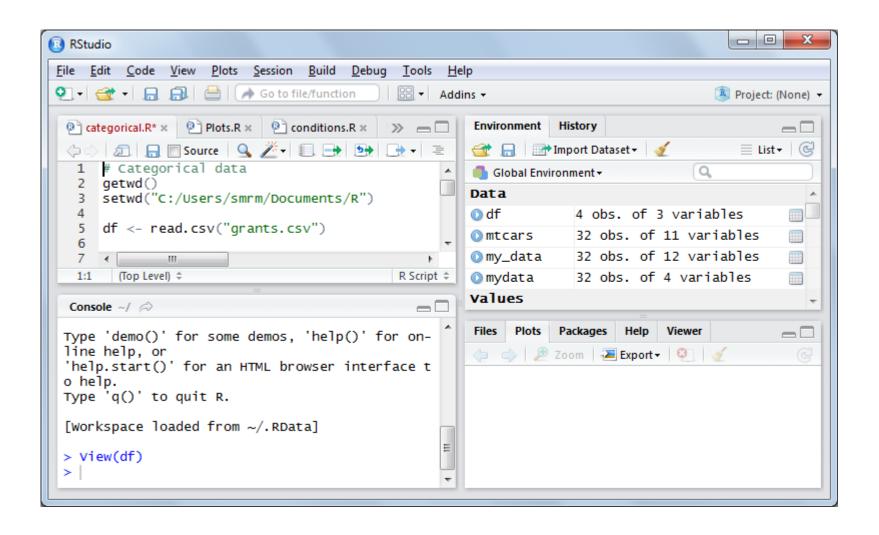
# **Basics of R programming (R tools)**

# Outline

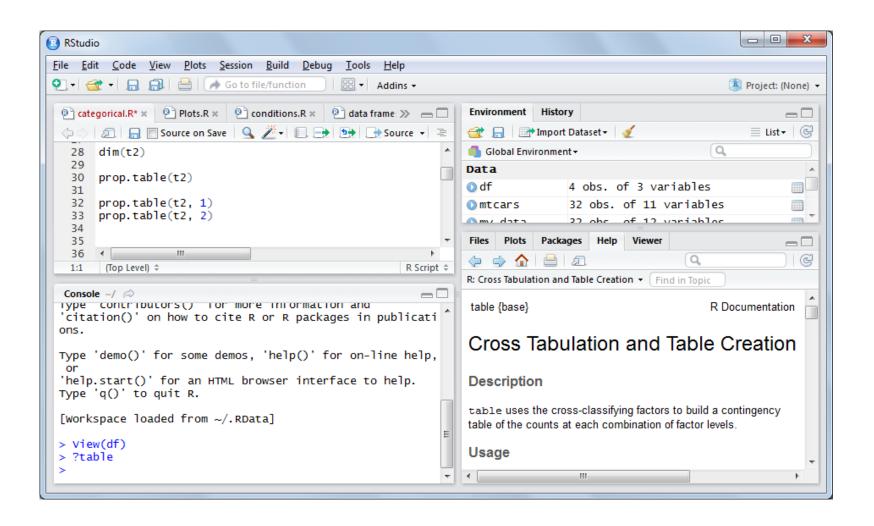
#### Topics:

- 1. R
- 1.1 R, R-scripts.
- 1.2 Asking questions in R
- 1.3 Installing and loading R packages
- 2. Rstudio (Integrated Development Environment, an IDE for R)
- 3. Git. Git commands
- 4. Github
- 5. Stages in data analysis.

### Rstudio. Integrated Development Environment



## Rstudio. Asking questions in Rstudio



## Git. Git commands

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:\Users\smrm>git
usage: git [--version] [--exec-path[=<path>]] [--html-path] <u>[--man-path] [--info</u>
 path]
           [-p|--paginate|--no-pager] [--no-replace-objects] [--bare]
           [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
           [-c name=value] [--help]
           <command> [<args>]
The most commonly used git commands are:
   add
              Add file contents to the index
  bisect
              Find by binary search the change that introduced a bug
  branch
             List, create, or delete branches
   checkout Checkout a branch or paths to the working tree
  clone
             Clone a repository into a new directory
  commit
              Record changes to the repository
  diff
              Show changes between commits, commit and working tree, etc
  fetch
              Download objects and refs from another repository
              Print lines matching a pattern
   grep
             Create an empty git repository or reinitialize an existing one
  init
  log
              Show commit logs
              Join two or more development histories together
              Move or rename a file, a directory, or a symlink
   mν
  pull
              Fetch from and merge with another repository or a local branch
             Update remote refs along with associated objects
  push
             Forward-port local commits to the updated upstream head
  rebase
  reset
              Reset current HEAD to the specified state
              Remove files from the working tree and from the index
   rm
   show
              Show various types of objects
   status
             Show the working tree status
              Create, list, delete or verify a tag object signed with GPG
  tag
See 'git help <command>' for more information on a specific command.
C:\Users\smrm>
```

### Github



#### Ekaterina Kuznetsova

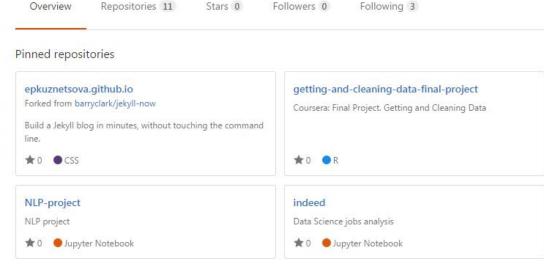
epkuznetsova

Data Science Immerse Course student in GA Sydney.

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#### 51 contributions in the last year



# Stages in data analysis

- defining a question of interest
- identifying the ideal data set
- determining if that data is even accessible
- obtain the data whether it's from a database, or from a website
- cleaning the data up so that it can be processed and analyzed
- exploratory analysis
- performing statistical prediction or modeling
- Interpreting your results
- synthesizing and writing results in reproducible ways that can be shared with other people.
- distributing results through things like interacting graphics, presentations, and through interactive apps built on top of R

https://www.r-project.org/ - main site
https://cran.r-project.org/mirrors.html CRAN mirrors
https://cran.r-project.org/bin/windows/base/ download for Windows
www.rstudio.com RStudio
www.github.com Version control site

#### https://git-scm.com/downloads Git

```
$ git config —global user.name "Your Name Here"
$ git config —global user.email "your_email@example.com"
$ git config —list
$ exit
```