

# xkcd.com/1205

HOW LONG CAN YOU WORK ON MAKING A ROUTINE TASK MORE  
EFFICIENT BEFORE YOU'RE SPENDING MORE TIME THAN YOU SAVE?  
(ACROSS FIVE YEARS)

		HOW OFTEN YOU DO THE TASK					
		50/DAY	5/DAY	DAILY	WEEKLY	MONTHLY	YEARLY
HOW MUCH TIME YOU SHAVE OFF	1 SECOND	1 DAY	2 HOURS	30 MINUTES	4 MINUTES	1 MINUTE	5 SECONDS
	5 SECONDS	5 DAYS	12 HOURS	2 HOURS	21 MINUTES	5 MINUTES	25 SECONDS
	30 SECONDS	4 WEEKS	3 DAYS	12 HOURS	2 HOURS	30 MINUTES	2 MINUTES
	1 MINUTE	8 WEEKS	6 DAYS	1 DAY	4 HOURS	1 HOUR	5 MINUTES
	5 MINUTES	9 MONTHS	4 WEEKS	6 DAYS	21 HOURS	5 HOURS	25 MINUTES
	30 MINUTES		6 MONTHS	5 WEEKS	5 DAYS	1 DAY	2 HOURS
	1 HOUR		10 MONTHS	2 MONTHS	10 DAYS	2 DAYS	5 HOURS
	6 HOURS				2 MONTHS	2 WEEKS	1 DAY
	1 DAY					8 WEEKS	5 DAYS

# Reducing Working Environment Inefficiencies

RStudio/Latex, Unix-like, & Git

# Goals

- Reduce the amount of “Copy Pasta”
- Set it and forget it
- Minimize keystrokes and thinking required

# RStudio

- Integrated Development Environment - IDE
- “RStudio IDE is a powerful and productive user interface for R. It’s free and open source, and works great on Windows, Mac, and Linux.” [1]
- “An IDE built just for R” [2]
  - “Syntax highlighting, code completion, and smart indentation”
  - “Execute R code directly from the source editor”

~/workbench - RStudio

```

1 # User Trend Analysis
2 # Breakdown of active and non-active users
3
4 library(plyr)
5 library(ggplot2)
6
7(userData <- read.csv("userDataTrends.csv"))
8(userData <- subset(userData, select = -c(id, group)))
9(userData$active <- as.factor(userData[,1]))
10
11 states <- levels(userData$state)
12
13 names(userData)
14 count(userData, "active == 1")
15 View(userData)
16
17 summary(subset(userData, active == 1)$state)
18 summary(subset(userData, active == 0)$state)
19
20(qplot(state, age, color = active, data = userData,
21      main = "Breakdown of Users by Age and State") +
22      opts(plot.title = theme_text(size = 19))
23
23:1 f (Top Level) ▾
  
```

**Workspace** **History**

**Data**

userData 580 obs. of 5 variables

Values

active integer[270]

states character[11]

Functions

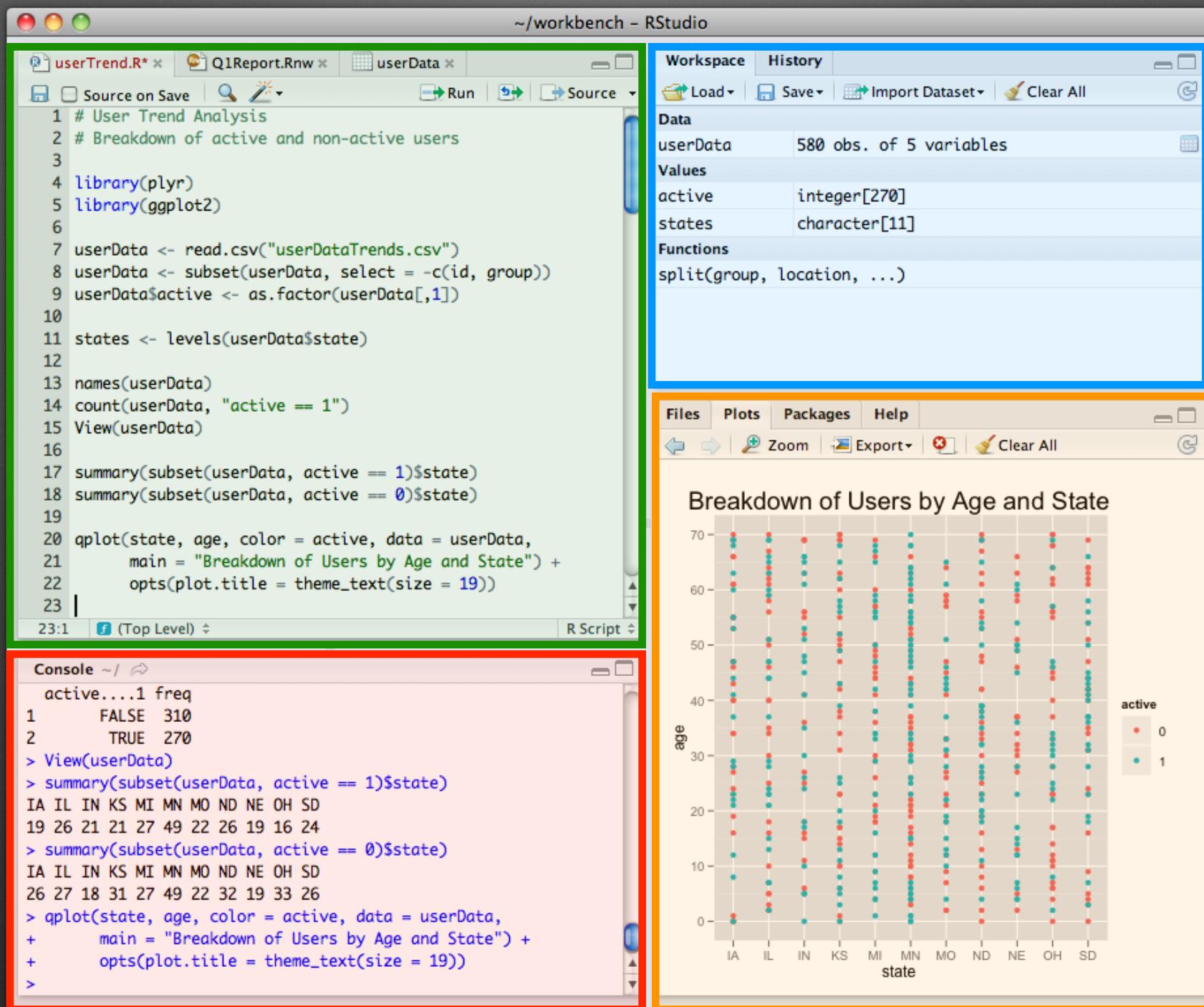
split(group, location, ...)

**Files** **Plots** **Packages** **Help**

**Breakdown of Users by Age and State**

active

- 0
- 1



~/workbench - RStudio

userTrend.R\* Q1Report.Rnw\*(userData)

Source on Save Run Source

```
1 # User Trend Analysis
2 # Breakdown of active and non-active users
3
4 library(plyr)
5 library(ggplot2)
6
7 userData <- read.csv("userDataTrends.csv")
8
9 user
10 s
11 n
12 n
13 co
14 co
15 View(userData)
16
17 summary(subset(userData, active == 1)$state)
18 summary(subset(userData, active == 0)$state)
19
20 qplot(state, age, color = active, data = userData,
21       main = "Breakdown of Users by Age and State") +
22       opts(plot.title = theme_text(size = 19))
23 |
```

23:1 (Top Level) R Script

Console ~ /

```
active....1 freq
1 FALSE 310
2 TRUE 270
> View(u
> summar
IA IL IN
19 26 21
> summar
IA IL IN
26 27 18
> qplot(state, age, color = active, data = userData,
+       main = "Breakdown of Users by Age and State") +
+       opts(plot.title = theme_text(size = 19))
>
```

Main Focus Area  
60%

Hardly Ever Used  
1%

Breakdown of Users by Age and State

Plots / Files / Help  
20%

~/customize - RStudio

```
binomialLattice.R* | priceMat | probMat | Run | Source |
```

Source on Save

```

1 priceMat <- matrix(NA, ncol=nsteps+1, nrow=2*nsteps+1,
| dimnames=list(as.character(nsteps:-nsteps),
| as.character(0:nsteps)))
2 priceMat["0", "0"] <- S0
3 for(colnum in 1:nsteps) {
4   for(rownum in seq(colnum, -colnum, by=-2)) {
5     if(rownum>0) {
6       priceMat[paste(rownum),
7       paste(colnum)] <- priceMat[paste(rownum-1),
8       paste(colnum-1)]*u
9     } else {
10      priceMat[paste(rownum),
11      paste(colnum)] <- priceMat[paste(rownum+1),
12      paste(colnum-1)]*d
13    }
14  }
15}
16
17
```

## Main Focus Area

Console ~/binomial/ ↗

```

> sigma <- 0.20
> nsteps <- 4
> source("~/binomial/binomialLattice.R")
> priceMat
0          1          2          3          4
4 NA         NA         NA         NA
3 NA         NA         NA         NA
2 NA         NA         NA         NA
1 NA         NA         NA         NA
0 100        NA 100.000000  NA 100.000000
-1 NA 90.48374    NA 90.48374    NA
-2 NA         NA 81.87308    NA 81.87308
-3 NA         NA         NA 74.08182    NA
-4 NA         NA         NA         NA 67.03200
> plotLattice(priceMat, "Price Lattice", digits=2)
>
```

## Code Execution

Files Plots Packages

Zoom

Price Lattice

## Plots / Files / Help

Hardly Ever Used  
1%

The screenshot shows the RStudio interface with the following components:

- Code Editor:** Displays R code for generating a binomial lattice. The code defines three matrices: `priceMat`, `probMat`, and `updownMat`. The `priceMat` is initialized with zeros and updated using a loop. The `probMat` is initialized with ones and updated using another loop.
- Console:** Shows the R session output. It includes the assignment of `sigma` and `nsteps`, sourcing the script, and printing the `priceMat` matrix. The matrix values are rounded to two decimal places.
- Plots:** A plot titled "Price Lattice" showing the price evolution over time steps. The x-axis is labeled "time steps" and ranges from 0 to 4. The y-axis is labeled "up/down steps" and ranges from -4 to 4. The plot shows a binomial tree starting at price 100 at step 0. At each step, the price can move up or down by a factor of  $\sqrt{0.2}$ . The final prices at step 4 are labeled as 149.18, 134.99, 122.14, 110.52, 100, 90.48, 81.87, 74.08, and 67.03.

The screenshot shows the RStudio IDE interface. The top bar displays the title `~/execute - RStudio`. The left pane contains two tabs: `analysis.R*` and `prep.R*`. The `analysis.R*` tab is active, showing R code. A tooltip over the `Run` button says `Run the current line or selection (⌘+R)`. The code includes imports for `plyr`, `lattice`, and `ggplot2`, and data loading from `stats.csv`. The `clean` variable is defined as `prepareStats(rawdata)`. The `active` subset is selected where `daysSinceAccountCreated < 30`. The `Console` pane at the bottom shows the execution of this code, including package loading and the creation of the `clean` dataset. The right pane is the `Packages` browser, listing available packages like `boot`, `brew`, `class`, etc., with `datasets`, `ggplot2`, and `graphics` checked.

```
1 # User Analysis
2
3 setwd("~/analysis")
4 source("prep.R")
5
6 library(plyr)
7 library(lattice)
8 library(ggplot2)
9
10 # Import data set
11 rawdata <- read.csv("stats.csv")
12 totalUsers <- dim(rawdata)[1]
13
14 # Clean data set
15 clean <- prepareStats(rawdata)
16
17 # Subset of active users
18 active <- subset(clean, active == 1)
19 count(active, "daysSinceAccountCreated < 30")[2,2]
20 mean(active$age)
21
22
23
```

Console ~/analysis/

```
> setwd("~/analysis")
> source("prep.R")
> library(plyr)
> library(lattice)
> library(ggplot2)
Loading required package: grid
Loading required package: proto
> # Import data set
> rawdata <- read.csv("stats.csv")
> totalUsers <- dim(rawdata)[1]
>
> # Clean data set
> clean <- prepareStats(rawdata)
>
```

Workspace History

Data

clean	360404 obs. of 35 variables
rawdata	530750 obs. of 35 variables
Values	
totalUsers	530750L
Functions	
evalPercentage(expression, index)	
formatInteger(object, ...)	
prepareStats(data, sampleSize = NA)	

Files Plots Packages Help

Install Packages Check for Updates

<input type="checkbox"/> <a href="#">boot</a>	Bootstrap Functions (originally by Angelo Canty for S)
<input type="checkbox"/> <a href="#">brew</a>	Templating Framework for Report Generation
<input type="checkbox"/> <a href="#">class</a>	Functions for Classification
<input type="checkbox"/> <a href="#">cluster</a>	Cluster Analysis Extended Rousseeuw et al.
<input type="checkbox"/> <a href="#">codetools</a>	Code Analysis Tools for R
<input type="checkbox"/> <a href="#">colorspace</a>	Color Space Manipulation
<input type="checkbox"/> <a href="#">compiler</a>	The R Compiler Package
<input checked="" type="checkbox"/> <a href="#">datasets</a>	The R Datasets Package
<input type="checkbox"/> <a href="#">digest</a>	Create cryptographic hash digests of R objects
<input type="checkbox"/> <a href="#">evaluate</a>	Parsing and evaluation tools that provide more details than the default.
<input type="checkbox"/> <a href="#">foreign</a>	Read Data Stored by Minitab, S, SAS, SPSS, Stata, Systat, dBase, ...
<input checked="" type="checkbox"/> <a href="#">ggplot2</a>	An implementation of the Grammar of Graphics
<input checked="" type="checkbox"/> <a href="#">graphics</a>	The R Graphics Package

# **Latex Within RStudio**

- RStudio is an Integrated Development Environment
- Same Latex compiler
- Enhance functionality

~/pdf - RStudio

portfolio.R \* binomialLattice.Rnw \*

Compile PDF

Run Source

Compile a PDF from the current LaTeX or Sweave document (⌘+Shift+P)

```
2 \usepackage{amsmath}
3 \usepackage{amssymb}
4 \usepackage{epstopdf}
5 \usepackage{fullpage}
6 \usepackage[parfill]{parskip}
7 \usepackage{graphicx}
8
9 \title{Multiplicative Binomial Lattice}
10
11 \begin{document}
12
13 % Code Chunk 1
14 <<Code Chunk 1, fig=FALSE, include=FALSE, echo=FALSE,
| results=hide >>
15
16 # function to plot lattice
17 plotLattice <- function(mat,title="Price Lattice",digits=2)
| {
18   nstps <- ncol(mat) - 1
19   plot(NA,type="n",
20   xlim=c(0,nstps),
23:1
```

Sweave Document

Console ~ /binomial/

```
+       (mat[paste(rownum), paste(column)],digits),
+       pos=3,cex=0.75,col="darkgreen")
+       points(x=column,y=rownum,pch=18)
+     }
+   }
+ }
+ title(title)
+
> compilePdf("~/binomial/binomialLattice.Rnw")
Writing to file binomialLattice.tex
Processing code chunks with options ...
1 : term hide (label = Code Chunk 1)
2 : term hide (label = Code Chunk 2)
3 : echo term hide (label = Code Chunk 3)
```

Workspace History

Load Save Import Dataset Clear All

Data

priceMat 9x5 double matrix  
probMat 9x5 double matrix

Functions

plotLattice(mat, title = "Price Lattice", digits = 2)

Files Plots Packages Help

New Folder Delete Rename More

Home binomial

Name	Size	Modified
..		
binomialLattice.pdf	237.3 KB	Jan 5, 2011, 2:27 PM
binomialLattice.Rnw	15.9 KB	Jan 5, 2011, 2:27 PM
binomialLattice.tex	10.6 KB	Jan 5, 2011, 2:27 PM
priceMatAprox1.png	27.1 KB	Jan 5, 2011, 2:27 PM
priceMatAprox2.png	26.2 KB	Jan 5, 2011, 2:27 PM
probabilityMatAprox1.png	27.6 KB	Jan 5, 2011, 2:27 PM
probabilityMatAprox2.png	28 KB	Jan 5, 2011, 2:27 PM

# Integrate R and Latex

- **Sweave**
  - The purpose is "to create dynamic reports, which can be updated automatically if data or analysis change" [4]
- **knitr**
  - **Sweave + cacheSweave + pgfSweave + weaver + animation::saveLatex + R2HTML::RweaveHTML + highlight::HighlightWeaveLatex + 0.2 \* brew + 0.1 \* SweaveListingUtils + more** [5]

# R Code in Latex (Sweave)

```
\documentclass{article}
\begin{document}
\SweaveOpts{concordance=TRUE}
This is Sweave output

<<>>=
fib <- function(x) {
  if (x < 2) return(1)
  fib(x - 1) + fib(x - 2)
}
result <- fib(10)
result
@
\end{document}
```

This is Sweave output

```
> fib <- function(x) {
+   if (x < 2) return(1)
+   fib(x - 1) + fib(x - 2)
+ }
> result <- fib(10)
> result
[1] 89
```

# R Code in Latex (knitr)

```
% !Rnw weave=knitr
\documentclass{article}
\begin{document}
This is knitr output

<<>>=
fib <- function(x) {
  if (x < 2) return(1)
  fib(x - 1) + fib(x - 2)
}
result <- fib(10)
result
@
\end{document}
```

This is knitr output

```
fib <- function(x) {
  if (x < 2)
    return(1)
  fib(x - 1) + fib(x - 2)
}
result <- fib(10)
result

## [1] 89
```

**\*Histogram Demo**

# Useful Packages

- `\usepackage{any size}`
  - % \marginsize{ left }{ right }{ top }{ bottom }  
`\marginsize{ 2cm }{ 2cm }{ 2cm }{ 2cm }`
- `\usepackage{enumerate}`
  - Ordered list
  - `\begin{enumerate}[(a)]`
  - `\begin{enumerate}[i)]`
- `\usepackage{minted}`

# minted

- Syntax Highlighter - “over 150 different programming languages”

- Include code directly

- \begin{minted}{c}  
int main() {  
 printf("hello, world");  
 return 0;  
}  
\end{minted}

```
int main() {  
    printf("hello, world");  
    return 0;  
}
```

- Include files

- \inputminted[<options>]{<language>}{<filename>}

# All Packages, All the Time

- Use a personal “include” file
  - \documentclass{article}  
\input{./latex\_short\_cuts.Rnw}  
\begin{document}
  - ...
- Contains
  - packages - anysize, enumerate, minted, etc.
  - package setups - \marginsize{....}
  - custom functions

# Custom Functions

- Goals
  - Type less!
  - Common / confusing commands
  - Personal shortcuts

# Custom Functions

- `\begin{array}{rcll}`  
...  
`\end{array}`
- % begin array  
`\newcommand{ \ba }{ \begin{array}{rcll} }`  
% end array  
`\newcommand{ \ea }{ \end{array} }`
- `\ba`  
...  
`\ea`

# Custom Functions

- % Gradient

```
\newcommand{\grad}{\nabla}\newcommand{\gradient}{\grad}
```

- % Limit as n goes to infinity

```
\newcommand{\limN}{\lim\limits_{n \rightarrow \infty}}
```

- % Partial Derivatives

```
\newcommand{\pader}[1]{\frac{\partial}{\partial #1}}
```

\pader{x} -> 
$$\frac{\partial}{\partial x}$$

# Custom Functions

- **Begin Enumerate** - \ben
  - `\newcommand{\ben}{\begin{enumerate}}`
- **(a)** - \bena
  - `\newcommand{\bena}{\begin{enumerate}[(a)]}`
- **i)** - \beni
  - `\newcommand{\beni}{\begin{enumerate}[i)]}`
- **End Enumerate** - \een
  - `\newcommand{\een}{\end{enumerate}}`

# Unix-like

- Goals
  - Type less!
  - Common / confusing commands
  - Personal shortcuts

# History

- Type less!

- File: `~/.profile`

- `# add input keys  
export INPUTRC=~/inputrc`

```
# Save lots of history  
export HISTFILESIZE=10000  
export HISTSIZE=10000  
export HISTCONTROL=erasedups  
shopt -s histappend
```

# Search Your History

- File: `~/.input.rc`
  - set completion-ignore-case on  
\$if Bash  
    set show-all-if-ambiguous on  
\$endif

```
# Search backwards and forwards in history
# using up & down keys
"\e[A": history-search-backward
"\e[B": history-search-forward
```

# Custom Commands

- Goal:
  - Common / confusing commands
  - Personal shortcuts

# Custom Command Location

- Common place for all work stations
- ~/Dropbox/bin/<FOLDER>/<FILENAME>
- File: “~/.profile”

```
export PATH="`echo $HOME/Dropbox/bin/* | tr ' ' ':'`:$PATH"
```

**\*Show Local ./bin**

# Custom Command - lime

- File: “lime”
  - chmod +x ./lime
  - ```
#!/bin/bash
open -a "Sublime Text 2" "$@"
```

# Custom Command - R

- File: “R”

- chmod +x ./R
  - #!/bin/bash  
if [ -z "\$\*" ]  
then  
    /usr/bin/R --no-save --no-restore-data --quiet  
else  
    /usr/bin/R "\$@"  
fi

# Custom Command - download\_site

- File: “download\_site”
  - chmod +x ./download\_site
  - ```
#!/bin/bash -e
if [[ "$#" != 0 ]]
then
wget -p -r -np -l 15 "$@"
else
echo "please include a website to download:
'download_site \"\$@\"''"
fi
```

**\*download\_site Demo**

# Descriptive Prompt

- File: `~/.profile`

```
export PS1='`__git_ps1 "\[\033[0;36m\] [%s]\[\033[0m\]"` \W: '
```

# Bash Colors

^[[0;49;31m	^[[1;49;31m	^[[2;49;31m	<u>^[[4;49;31m</u>	^[[5;49;31m	^[[7;49;31m
^[[0;49;32m	^[[1;49;32m	^[[2;49;32m	<u>^[[4;49;32m</u>	^[[5;49;32m	^[[7;49;32m
^[[0;49;33m	^[[1;49;33m	^[[2;49;33m	<u>^[[4;49;33m</u>	^[[5;49;33m	^[[7;49;33m
^[[0;49;34m	^[[1;49;34m	^[[2;49;34m	<u>^[[4;49;34m</u>	^[[5;49;34m	^[[7;49;34m
^[[0;49;35m	^[[1;49;35m	^[[2;49;35m	<u>^[[4;49;35m</u>	^[[5;49;35m	^[[7;49;35m
^[[0;49;36m	^[[1;49;36m	^[[2;49;36m	<u>^[[4;49;36m</u>	^[[5;49;36m	^[[7;49;36m
^[[0;49;37m	^[[1;49;37m	^[[2;49;37m	<u>^[[4;49;37m</u>	^[[5;49;37m	^[[7;49;37m
^[[0;49;90m	^[[1;49;90m	^[[2;49;90m	<u>^[[4;49;90m</u>	^[[5;49;90m	^[[7;49;90m
^[[0;49;91m	^[[1;49;91m	^[[2;49;91m	<u>^[[4;49;91m</u>	^[[5;49;91m	^[[7;49;91m
^[[0;49;92m	^[[1;49;92m	^[[2;49;92m	<u>^[[4;49;92m</u>	^[[5;49;92m	^[[7;49;92m
^[[0;49;93m	^[[1;49;93m	^[[2;49;93m	<u>^[[4;49;93m</u>	^[[5;49;93m	^[[7;49;93m
^[[0;49;94m	^[[1;49;94m	^[[2;49;94m	<u>^[[4;49;94m</u>	^[[5;49;94m	^[[7;49;94m
^[[0;49;95m	^[[1;49;95m	^[[2;49;95m	<u>^[[4;49;95m</u>	^[[5;49;95m	^[[7;49;95m
^[[0;49;96m	^[[1;49;96m	^[[2;49;96m	<u>^[[4;49;96m</u>	^[[5;49;96m	^[[7;49;96m
^[[0;49;97m	^[[1;49;97m	^[[2;49;97m	<u>^[[4;49;97m</u>	^[[5;49;97m	^[[7;49;97m
^[[0;49;39m	^[[1;49;39m	^[[2;49;39m	<u>^[[4;49;39m</u>	^[[5;49;39m	^[[7;49;39m

# Git

- “Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.” [8]
- “Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.” [8]
- SCM - Source Control Management

<http://git-scm.com> [8]

# Git Color

- File: “`~/.gitconfig`”
- Will already contain:
  - name
  - email
  - user
  - token
- [color]
  - branch = auto
  - diff = auto
  - status = auto
- [color "branch"]
  - current = cyan
  - local = yellow
  - remote = green
- [color "diff"]
  - meta = yellow bold
  - frag = magenta bold
  - old = red bold
  - new = green bold
- [color "status"]
  - added = yellow
  - changed = green
  - untracked = cyan

# Example

```
[rCmdCheck] datadr: g b | cat
  dev                                b269661 Update .travis.yml
  master                             b269661 Update .travis.yml
  parallelCheck                      6be346a Merge branch 'dev' into parallelCheck
* rCmdCheck                           486b909 [ahead 1] white space
  remotes/origin/HEAD                 -> origin/master
  remotes/origin/dev                  b269661 Update .travis.yml
  remotes/origin/gh-pages              0280161 update to reflect recent chagnes in package,
  remotes/origin/master               b269661 Update .travis.yml
  remotes/origin/parallelCheck        6be346a Merge branch 'dev' into parallelCheck
  remotes/origin/rCmdCheck            4e29485 updated description license
```

```
[rCmdCheck] datadr: g b
  dev                                b269661 Update .travis.yml
  master                             b269661 Update .travis.yml
  parallelCheck                      6be346a Merge branch 'dev' into parallelCheck
* rCmdCheck                           486b909 [ahead 1] white space
  remotes/origin/HEAD                 -> origin/master
  remotes/origin/dev                  b269661 Update .travis.yml
  remotes/origin/gh-pages              0280161 update to reflect recent chagnes in package,
  remotes/origin/master               b269661 Update .travis.yml
  remotes/origin/parallelCheck        6be346a Merge branch 'dev' into parallelCheck
  remotes/origin/rCmdCheck            4e29485 updated description license
```

# Custom Command - g

- [github.com/schloerke/g](https://github.com/schloerke/g)
- Autocomplete functionality given your current github command context

# Common Commands - g

- # get current status  
g status  
g st
- # add all files  
g add .  
g a .
- # see latest diff  
g diff  
g d  
g d master
- # see latest logs  
g l
- # checkout other branch  
g co BRANCH\_NAME
- # make new branch  
g make\_branch BRANCH\_NAME
- # undo changes  
g undo FILE FILE2
- # un-commit a file  
g unstage FILE FILE2

# Example - g st - git status

```
[rCmdCheck] datadr: g st
  dev          b269661 [origin/dev] Update .travis.yml
  master        b269661 [origin/master] Update .travis.yml
  parallelCheck 6be346a [origin/parallelCheck] Merge branch 'dev' into parallelCheck
* rCmdCheck      486b909 [origin/rCmdCheck: ahead 1] white space
# On branch rCmdCheck
# Your branch is ahead of 'origin/rCmdCheck' by 1 commit.
#   (use "git push" to publish your local commits)
#
# Changes not staged for commit:
#   (use "git add <file>..." to update what will be committed)
#   (use "git checkout -- <file>..." to discard changes in working directory)
#
#       modified:   R/ddo_ddf_kvHDFS.R
#       modified:   R/globals.R
#       modified:   R/mapreduce_kvHDFS.R
#
no changes added to commit (use "git add" and/or "git commit -a")
```

# Example - g a <TAB> - git add

```
[rCmdCheck] datadr: g a

add files

# On branch rCmdCheck
# Your branch is ahead of 'origin/rCmdCheck' by 1 commit.
#   (use "git push" to publish your local commits)
#
# Changes not staged for commit:
#   (use "git add <file>..." to update what will be committed)
#   (use "git checkout -- <file>..." to discard changes in working directory)
#
#       modified:   R/ddo_ddf_kvHDFS.R
#       modified:   R/globals.R
#       modified:   R/mapreduce_kvHDFS.R
#
no changes added to commit (use "git add" and/or "git commit -a")

..Rcheck/      .Rbuildignore  .gitignore    DESCRIPTION    NAMESPACE    README.md
.DS_Store     .git/          .travis.yml  LICENSE      R/           data/
```

# Example - g | - git logs

```
[rCmdCheck] datadr: g l
* 486b909 - (HEAD, rCmdCheck) white space <Barret Schloerke schloerke@gmail.com> (5 days ago)
* 4e29485 - (origin/rCmdCheck) updated description license <Barret Schloerke schloerke@gmail.com> (5 days ago)
* ffac02b - updated Rbuildignore to have proper grep expression <Barret Schloerke schloerke@gmail.com> (6 days ago)
* 84bbe5b - Merge branch 'parallelCheck' into rCmdCheck <Barret Schloerke schloerke@gmail.com> (6 days ago)
| \
| * 6be346a - (origin/parallelCheck, parallelCheck) Merge branch 'dev' into parallelCheck <Barret Schloerke schloerke@gmail.com> (6 days ago)
| |
| * 3dd830b - Merge branch 'dev' into rCmdCheck <Barret Schloerke schloerke@gmail.com> (6 days ago)
| |
| * b269661 - (origin/master, origin/dev, origin/HEAD, master, dev) Update .travis.yml <hafen rhafen@gmail.com> (6 days ago)
* | | 54db4d7 - Merge branch 'parallelCheck' into rCmdCheck <Barret Schloerke schloerke@gmail.com> (6 days ago)
| |
| * 3351404 - commented the parallel again <Barret Schloerke schloerke@gmail.com> (6 days ago)
| * 18194ac - added more files to .Rbuildignore <Barret Schloerke schloerke@gmail.com> (6 days ago)
* | | 915a284 - added documentation for s3method removeData.hdfsConn <Barret Schloerke schloerke@gmail.com> (6 days ago)
| |
| * 7a7e607 - uncommented parallel tests <Barret Schloerke schloerke@gmail.com> (6 days ago)
* | | 19f9dfc - white space <Barret Schloerke schloerke@gmail.com> (6 days ago)
* | | 0f44726 - renamed LICENSE.md to LICENSE to comply with R CMD check <Barret Schloerke schloerke@gmail.com> (6 days ago)
* | | fa6ad7a - Update .travis.yml <hafen rhafen@gmail.com> (6 days ago)
```

# Example - g co <TAB> - git checkout

```
[rCmdCheck] datadr: g co
```

```
checkout branch
```

```
dev                                b269661 Update .travis.yml
master                             b269661 Update .travis.yml
parallelCheck                      6be346a Merge branch 'dev' into parallel
* rCmdCheck                         486b909 [ahead 1] white space
                                     -> origin/master
remotes/origin/HEAD                b269661 Update .travis.yml
remotes/origin/dev                 0280161 update to reflect recent chagne
remotes/origin/gh-pages              b269661 Update .travis.yml
remotes/origin/master               6be346a Merge branch 'dev' into parallel
remotes/origin/parallelCheck        4e29485 updated description license
```

```
dev          master          parallelCheck
[rCmdCheck] datadr: g co
```

# Reduce Working Environment Inefficiencies

- Reduce the amount of “Copy Pasta”
- Set it and forget it
- Minimize keystrokes and thinking required

# Sources

All quotes collected on 2/24/14

1. [www.rstudio.com](http://www.rstudio.com)
2. <http://www.rstudio.com/ide/>
3. <http://www.rstudio.com/ide/screenshots/>
4. [http://cran.r-project.org/doc/Rnews/Rnews\\_2002-3.pdf](http://cran.r-project.org/doc/Rnews/Rnews_2002-3.pdf)
5. <http://yihui.name/knitr/>
6. <http://ctan.sharelatex.com/tex-archive/macros/latex/contrib/minted/minted.pdf>
7. [http://misc.flogisoft.com/bash/tip\\_colors\\_and\\_formatting](http://misc.flogisoft.com/bash/tip_colors_and_formatting)
8. <http://git-scm.com>
9. <http://xkcd.com/1205/>