

Reducing Working Environment Inefficiencies

RStudio/Latex, Unix-like, & Git

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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

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

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(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) R Script
```

Console ~ /

```

active....1 freq
1 FALSE 310
2 TRUE 270
> View(userData)
> summary(subset(userData, active == 1)$state)
IA IL IN KS MI MN MO ND NE OH SD
19 26 21 21 27 49 22 26 19 16 24
> summary(subset(userData, active == 0)$state)
IA IL IN KS MI MN MO ND NE OH SD
26 27 18 31 27 49 22 32 19 33 26
> qplot(state, age, color = active, data = userData,
+       main = "Breakdown of Users by Age and State") +
+       opts(plot.title = theme_text(size = 19))
>
```

Workspace History

Load Save Import Dataset Clear All

Data

userData 580 obs. of 5 variables

Values

active integer[270]

states character[11]

Functions

split(group, location, ...)

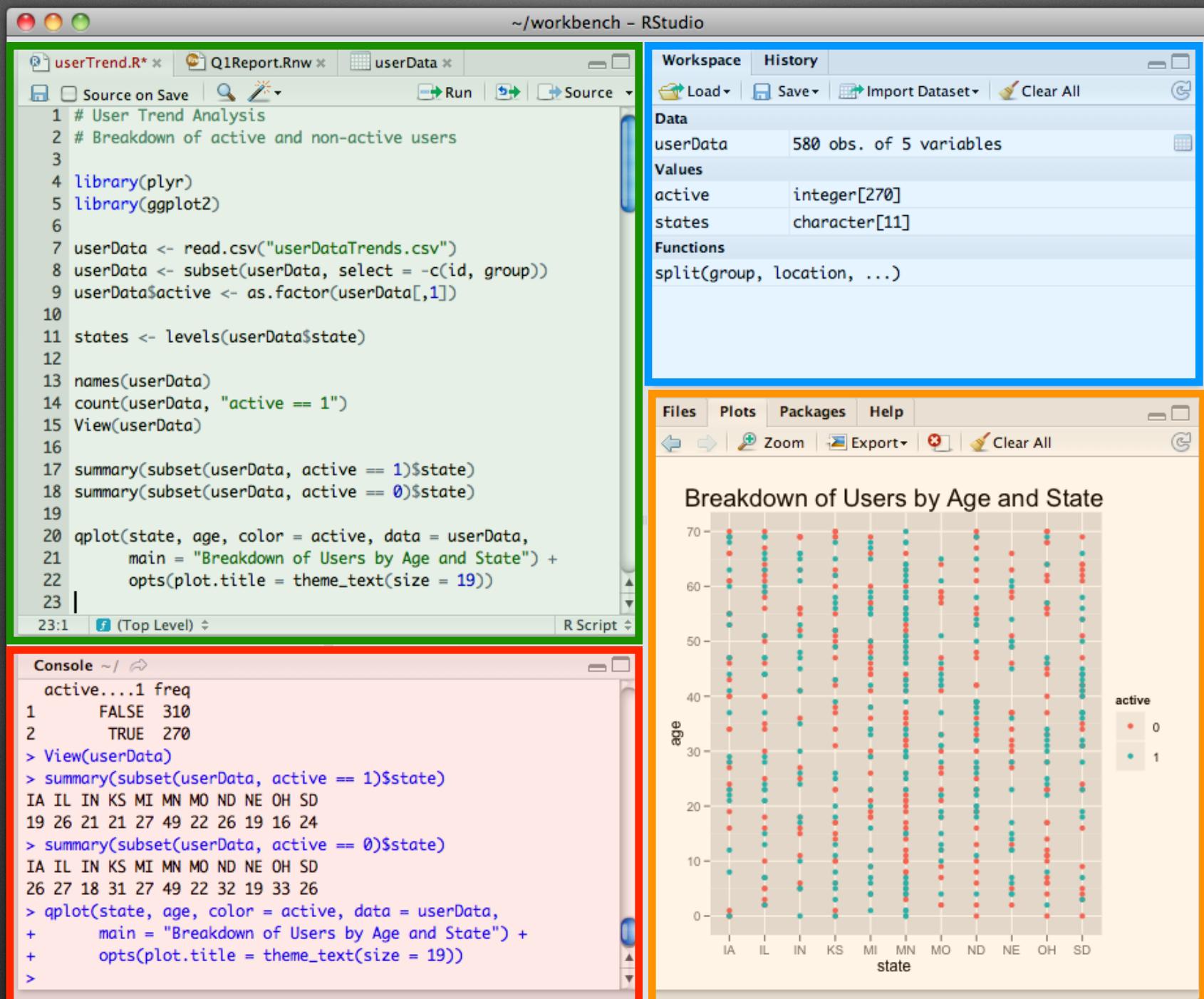
Files Plots Packages Help

Zoom Export Clear All

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 us
10 s
11 n
12 n
13 c
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 ~ /

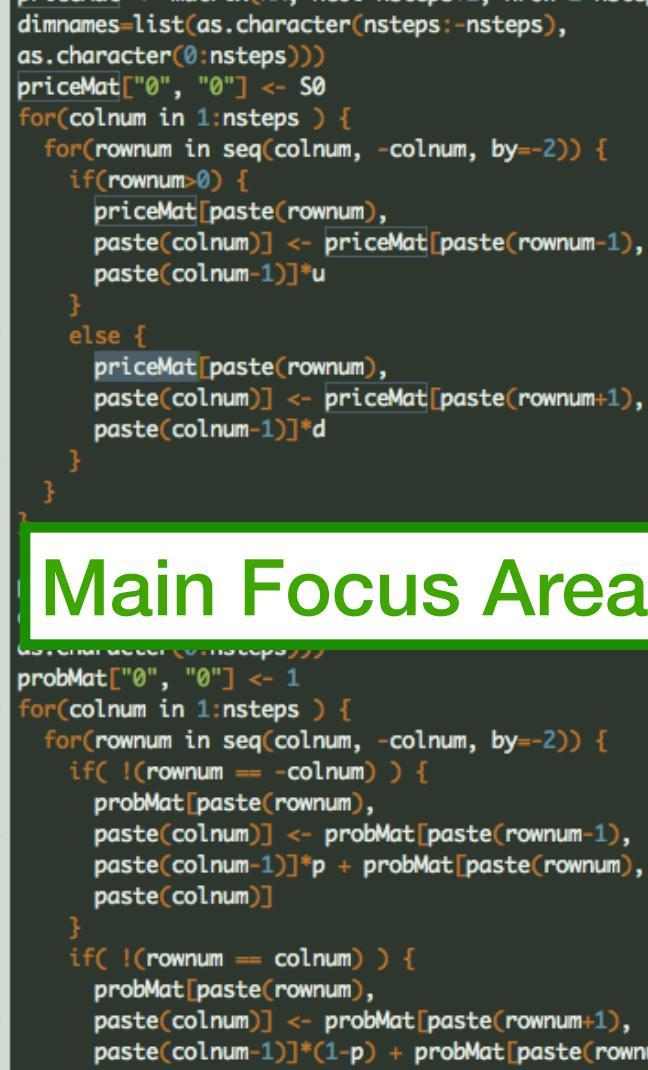
```
active....1 freq
1 FALSE 310
2 TRUE 270
> View(u
> summar
IA IL IN
19 26 21
> summar
IA IL IN
26 27 18
> qplot(state, age, color = active, data = userData,
+       main = "Breakdown of Users by Age and State") +
+       opts(plot.title = theme_text(size = 19))
>
```

Main Focus Area
60%

Hardly Ever Used
1%

Breakdown of Users by Age and State

Plots / Files / Help
20%



```
R binomialLattice.R* * priceMat * probMat *
Source on Save Run Source
1 priceMat <- matrix(NA, ncol=nsteps+1, nrow=2*nsteps+1,
2 | dimnames=list(as.character(nsteps:-nsteps),
3 | as.character(0:nsteps)))
4 priceMat["0", "0"] <- S0
5 for(colnum in 1:nsteps ) {
6   for(rownum in seq(colnum, -colnum, by=-2)) {
7     if(rownum>0) {
8       priceMat[paste(rownum),
9         paste(colnum)] <- priceMat[paste(rownum-1),
10        paste(colnum-1)]*u
11     }
12     else {
13       priceMat[paste(rownum),
14         paste(colnum)] <- priceMat[paste(rownum+1),
15        paste(colnum-1)]*d
16     }
17   }
18   Main Focus Area
19   | as.character(nsteps))
20   probMat["0", "0"] <- 1
21   for(colnum in 1:nsteps ) {
22     for(rownum in seq(colnum, -colnum, by=-2)) {
23       if( !(rownum == -colnum) ) {
24         probMat[paste(rownum),
25           paste(colnum)] <- probMat[paste(rownum-1),
26           paste(colnum-1)]*p + probMat[paste(rownum),
27           paste(colnum)]
28       }
29       if( !(rownum == colnum) ) {
30         probMat[paste(rownum),
31           paste(colnum)] <- probMat[paste(rownum+1),
32           paste(colnum-1)]*(1-p) + probMat[paste(rownum),
33           paste(colnum)]
```

~/customize - RStudio

Console ~ /binomial/ ↗

```
> sigma <- 0.20
> nsteps <- 4
> source("~/binomial/binomialLattice.R")
> priceMat
      0           1           2           3           4
4  NA
3  NA
2  NA
1  NA
0  100       NA 100.00000       NA 100.00000
-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

Price Lattice

Plots / Files / Help

Time Step	Up/Down Step
0	4
1	-1
2	-3
3	-2
4	-4

time steps

Main Focus Area

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`. It uses nested loops to calculate values based on up (`u`) and down (`d`) movements over `nsteps` time steps.
- Console:** Shows the R session history. It includes commands to set parameters (`> sigma <- 0.20`, `> nsteps <- 4`), source the script (`> source("~/binomial/binomialLattice.R")`), and print the `priceMat` (`> priceMat`). The printed matrix is as follows:

	0	1	2	3	4
0	NA	NA	NA	NA	149.18247
1	NA	NA	NA	134.98588	NA
2	NA	NA	122.14028	NA	122.14028
3	NA	110.51709	NA	110.51709	NA
4	100	NA	100.00000	NA	100.00000
-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

- Plot:** A plot titled "Price Lattice" showing the binomial tree structure. 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 nodes at each step, connected by lines representing up and down movements. Node values are labeled: (0,0) = 100, (1,1) = 110.52, (1,-1) = 90.48, (2,2) = 122.14, (2,0) = 100, (2,-2) = 81.87, (3,3) = 134.99, (3,1) = 110.52, (3,-1) = 90.48, (3,-3) = 74.08, (4,4) = 149.18, (4,2) = 122.14, (4,0) = 100, (4,-2) = 81.87, (4,-4) = 67.03.

<http://www.rstudio.com/ide/screenshots/> [3]

~/execute - RStudio

analysis.R* prep.R

Source on Save Run Source

Run the current line or selection (⌘+R)

```
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
```

16:1 f (Top Level) R Script

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

Load Save Import Dataset Clear All

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

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

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)
```

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