R and Bioconductor

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Outline

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R Package

- Hadley: In R, the fundamental unit of shareable code is the package.
- Hilary Parker: Seriously, it doesn’ t have to be about sharing your code (although that is an added benefit!). It is about saving yourself time.

References

- Writing R Extensions:
  http://cran.r-project.org/manuals.html
- R Packages from Hadley:
  http://r-pkgs.had.co.nz/
- Writing an R package from scratch:
  http://hilaryparker.com/2014/04/29/writing-an-r-package-from-scratch/
- 开发R程序包之忍者篇:
  http://cos.name/2011/05/write-r-packages-like-a-ninja/

R Package from Scratch

see cgr directory

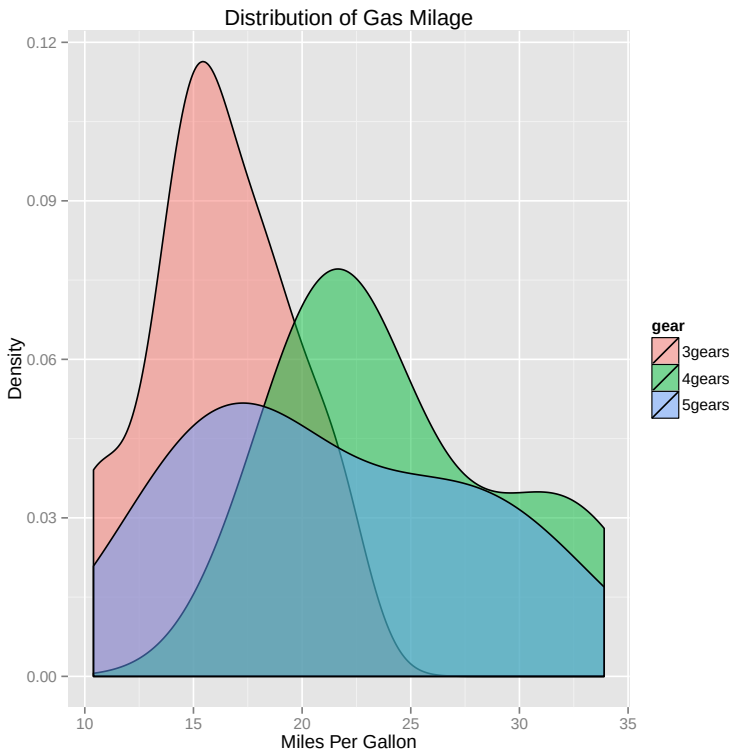
Why devtools?

- This book espouses my philosophy of package development:
- anything that can be automated, should be automated.
- Do as little as possible by hand.
- Do as much as possible with functions.

Next

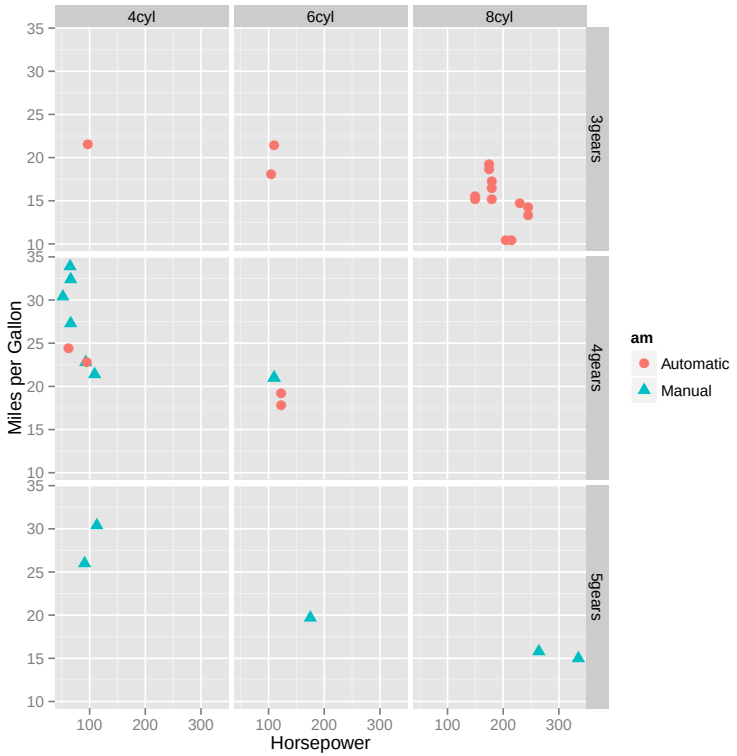
ggplot2

```
qplot(mpg, data=mtcars, geom="density", fill=gear, alpha=I(.
5), main="Distribution of Gas Milage", xlab="Miles Per
Gallon", ylab="Density")
```



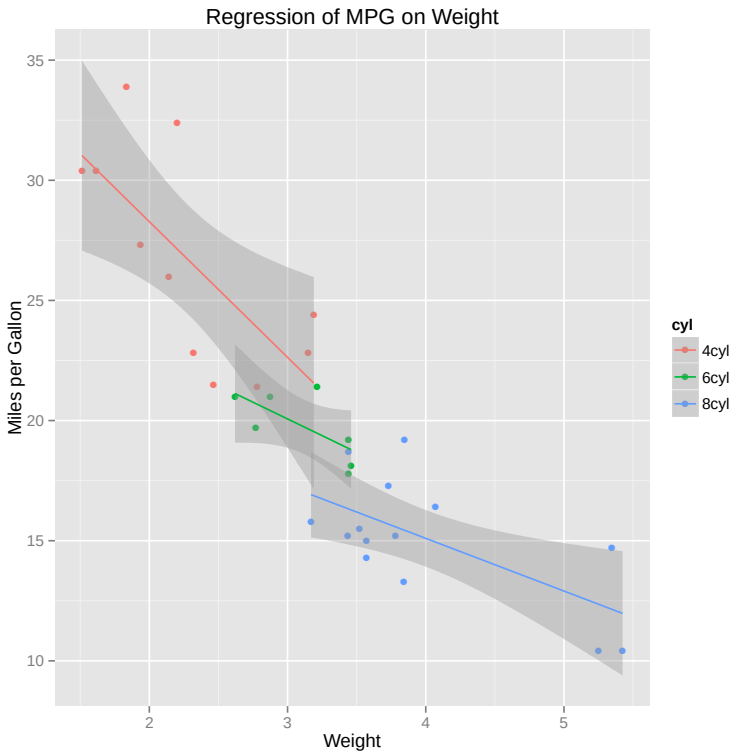
ggplot2

```
qplot(hp, mpg, data=mtcars, shape=am, color=am, facets=gear ~
size=I(3), xlab="Horsepower", ylab="Miles per Gallon")
```



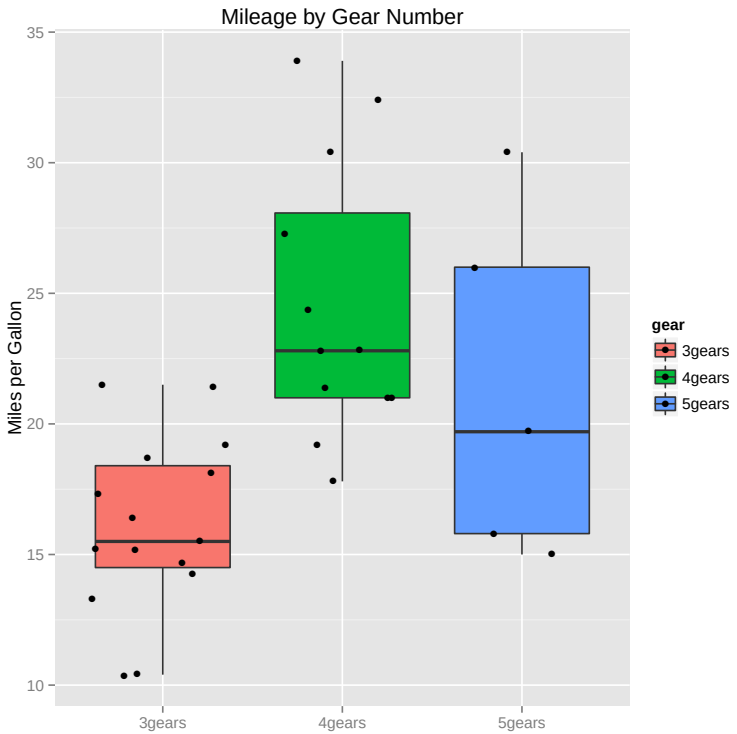
ggplot2

```
qplot(wt, mpg, data=mtcars, geom=c("point", "smooth"),
method="lm", formula=y x, color=cyl, main="Regression
of MPG on Weight", xlab="Weight", ylab="Miles per Gallon")
```



ggplot2

```
qplot(gear, mpg, data=mtcars, geom=c("boxplot", "jitter"),
fill=gear, main="Mileage by Gear Number", xlab="", ylab="Mile
per Gallon")
```



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