

# Lab8

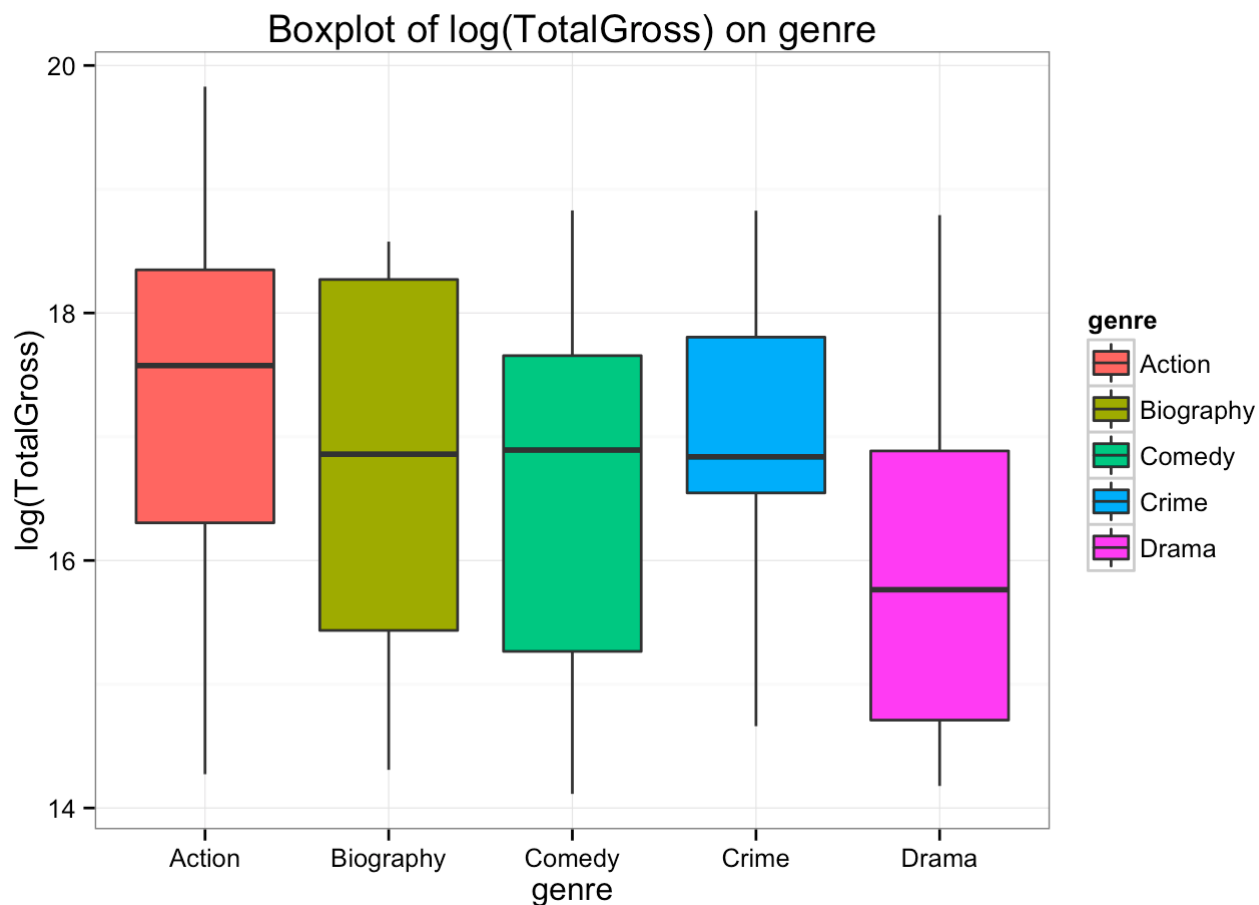
Vergil

November 25, 2015

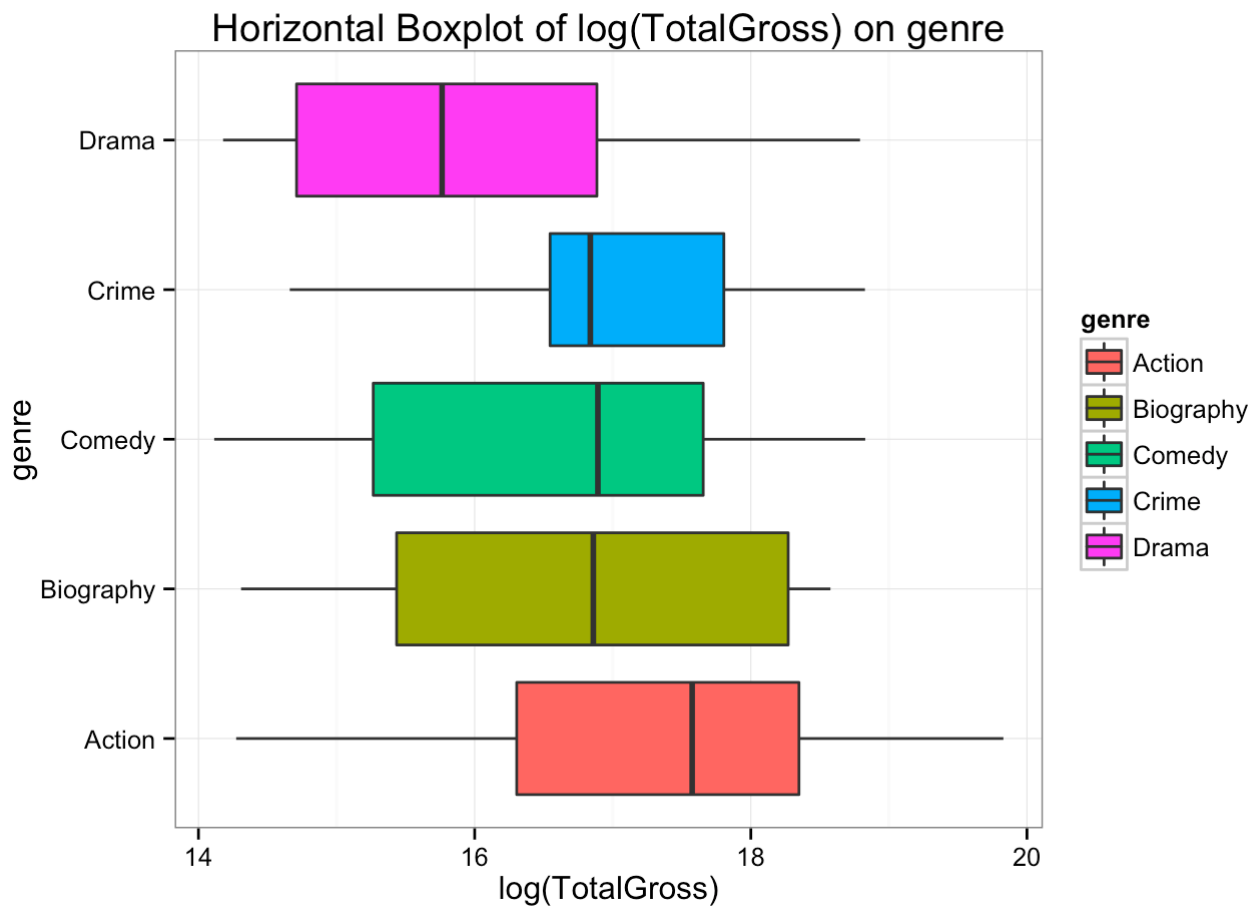
```
library(ggplot2)
library(tidyr)
library(reshape2)
```

2.

```
bom_imdb <- read.csv("~/Desktop/bom_imdb.csv", stringsAsFactors=FALSE)
bom_imdb2 <- bom_imdb[bom_imdb$genre %in% c("Action","Comedy","Drama","Biography","Crime"),c(4,20)]
ggplot(bom_imdb2,aes(x=genre,y=log(TotalGross),fill=genre))+geom_boxplot()+ggtitle("Boxplot of log(TotalGross) on genre")+theme_bw()
```

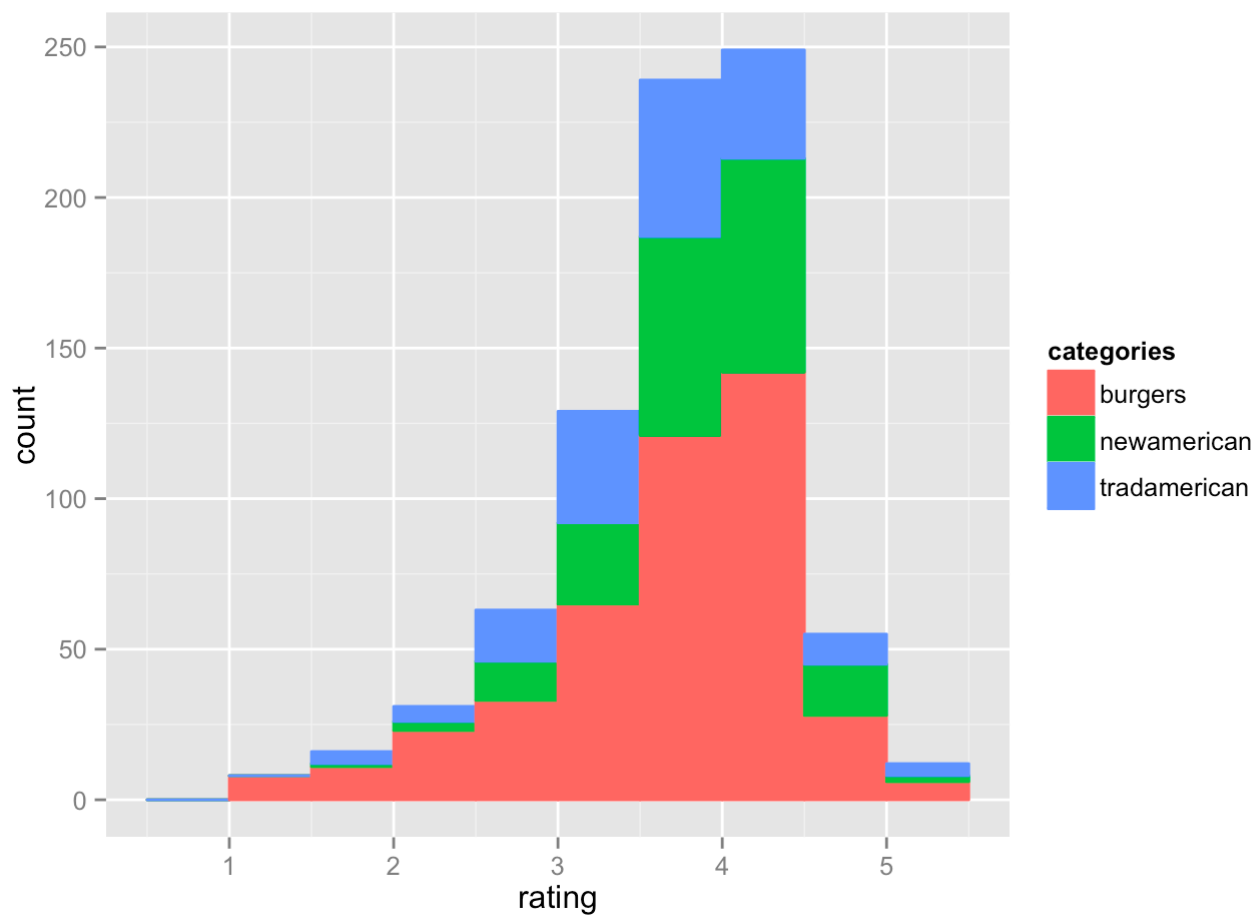


```
ggplot(bom_imdb2,aes(x=genre,y=log(TotalGross),fill=genre))+geom_boxplot()+ggtitle("Horizontal Boxplot of log(TotalGross) on genre")+coord_flip()+theme_bw()
```

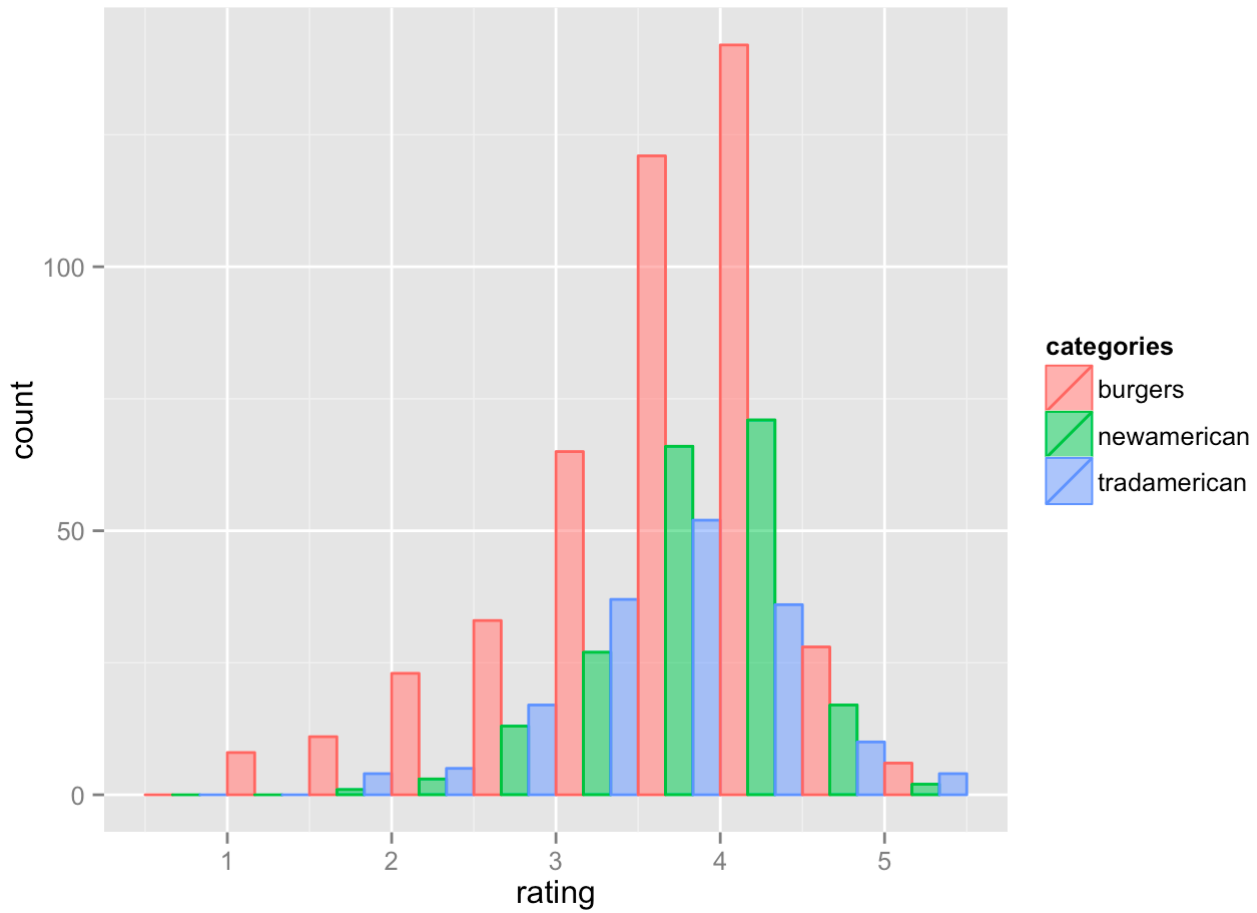


3.

```
burgers <- read.csv("~/Desktop/burgers.csv", stringsAsFactors=FALSE)
ggplot(burgers,aes(x=rating,color=categories,fill=categories))+geom_histogram(binwidth=0.5)
+theme_gray()
```



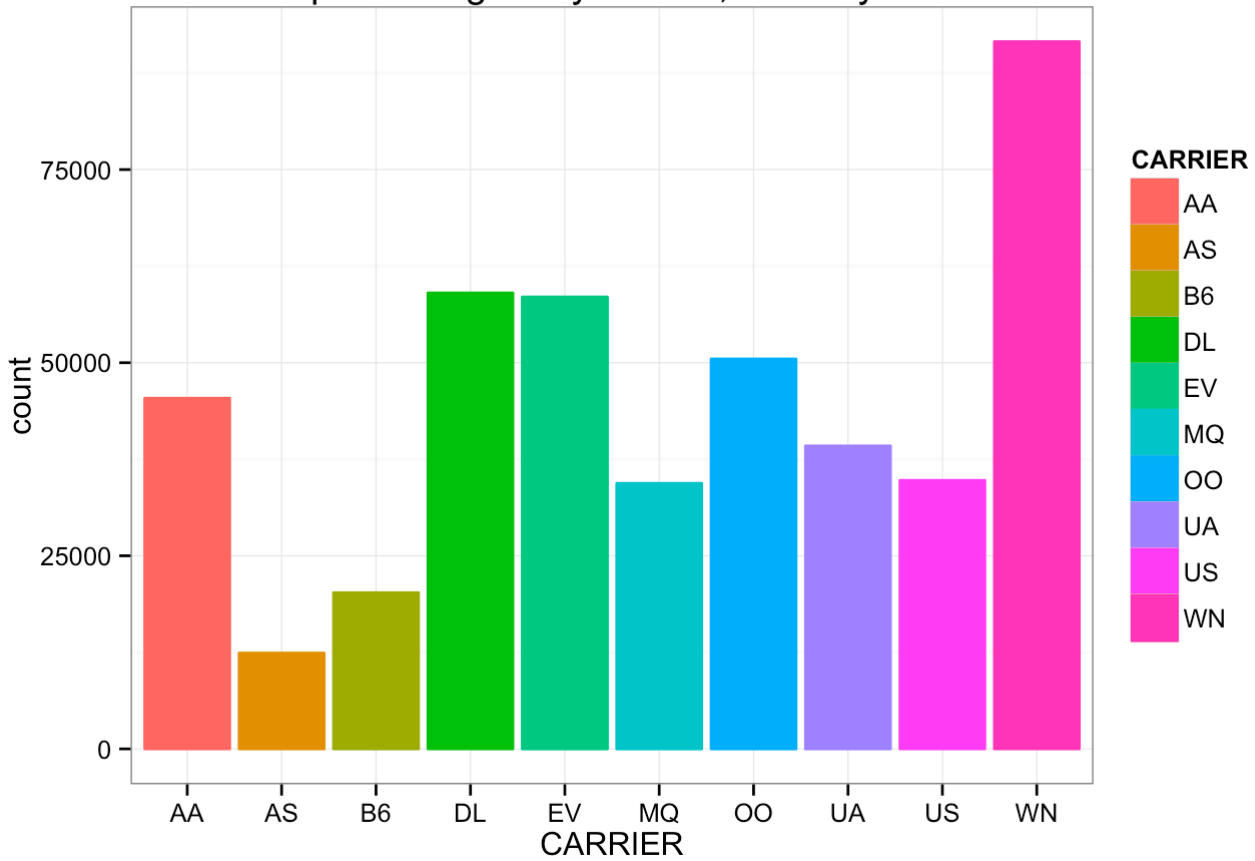
```
ggplot(burgers,aes(x=rating,color=categories,fill=categories))+geom_histogram(binwidth=0.5,
position = "dodge",alpha=0.5)+theme_gray()
```



4.

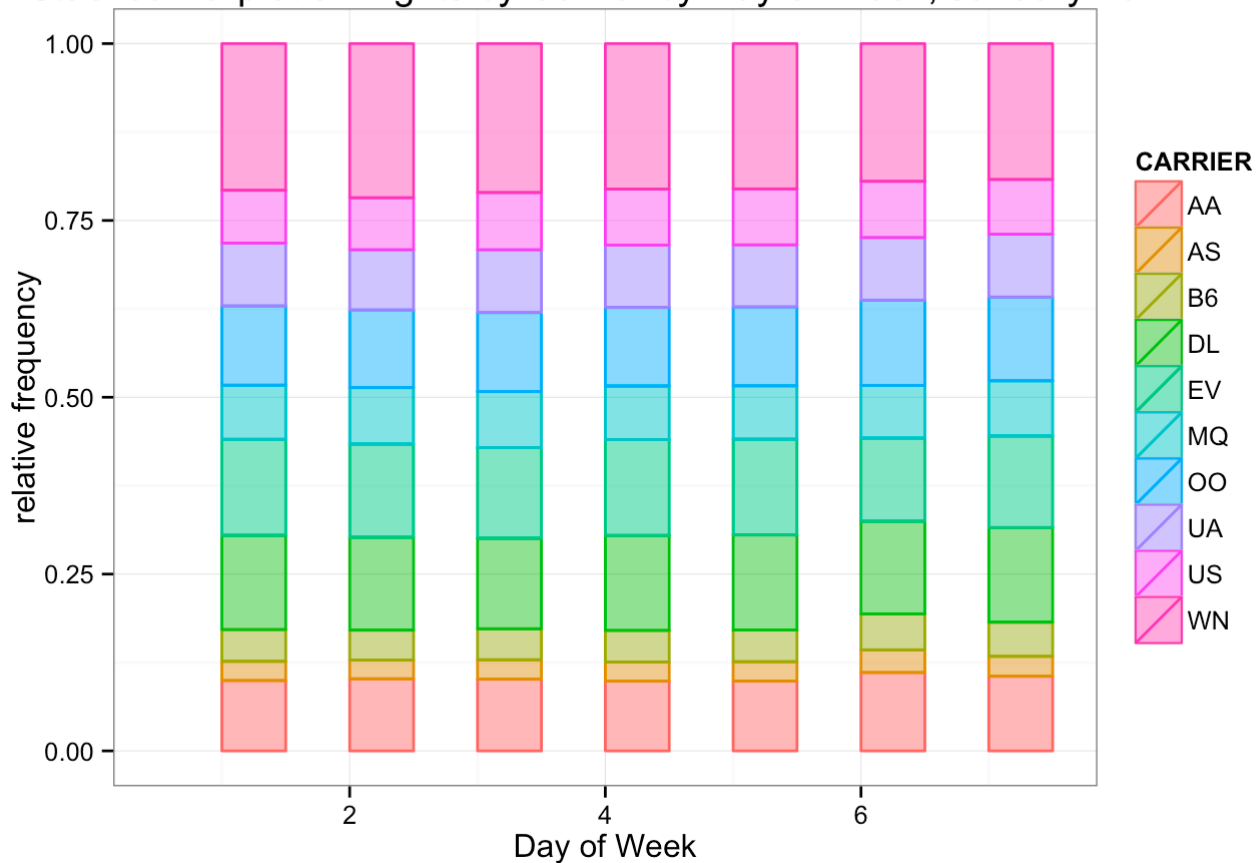
```
JANFLIGHTS <- read.csv("~/Desktop/JANFLIGHTS.csv", stringsAsFactors=FALSE)
ggplot(JANFLIGHTS, aes(x=CARRIER,color=CARRIER,fill=CARRIER)) + geom_bar()+theme_bw()+gg
title("Barplot of Flights by Carrier, January 2014")
```

Barplot of Flights by Carrier, January 2014



```
ggplot(JANFLIGHTS,aes(x=DAY_OF_WEEK,color=CARRIER,fill=CARRIER))+geom_histogram(position="
fill",alpha=0.5,binwidth=0.5)+theme_bw()+labs(y="relative frequency")+ggtitle("Stacked Ba
rplot of Flights by Carrier by Day of Week, January 2014")+xlab("Day of Week")+ylab("rel
ative frequency")
```

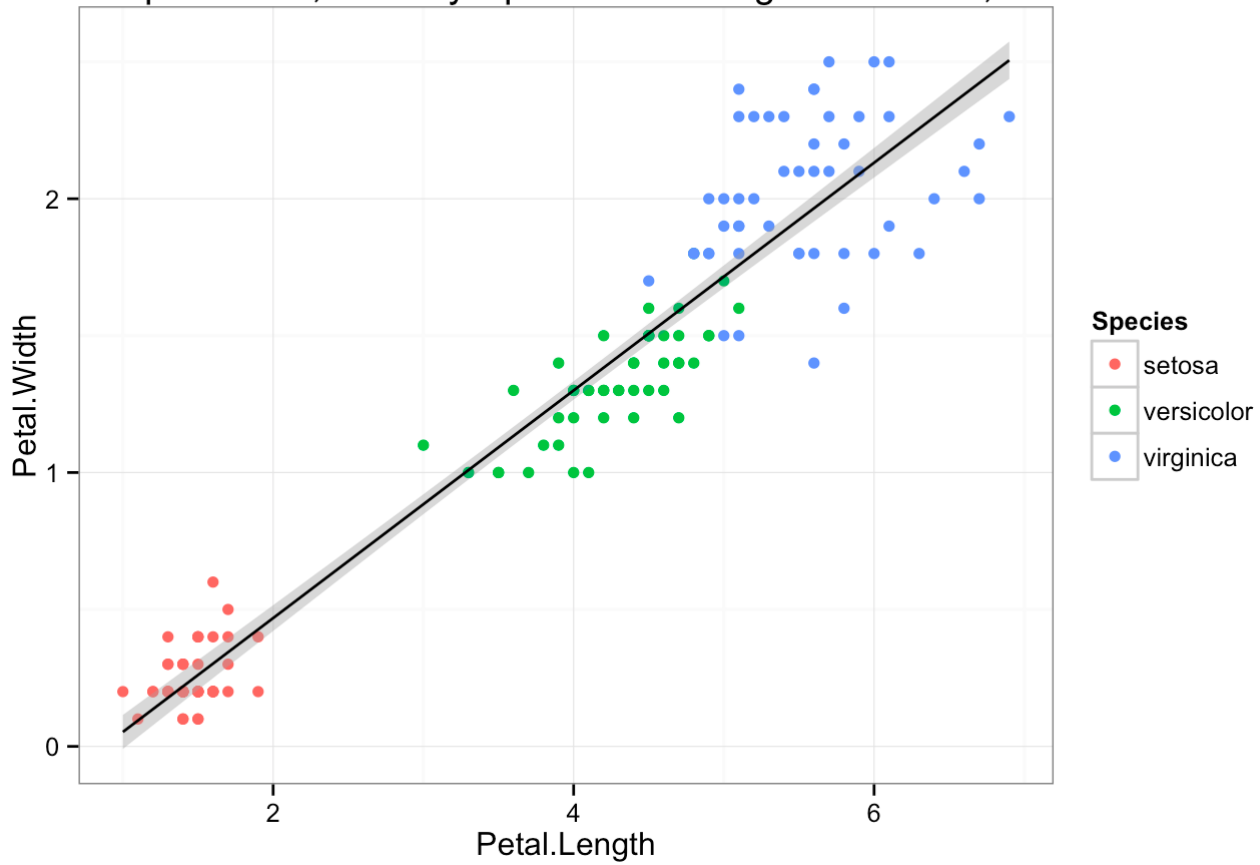
Stacked Barplot of Flights by Carrier by Day of Week, January 2014



5.

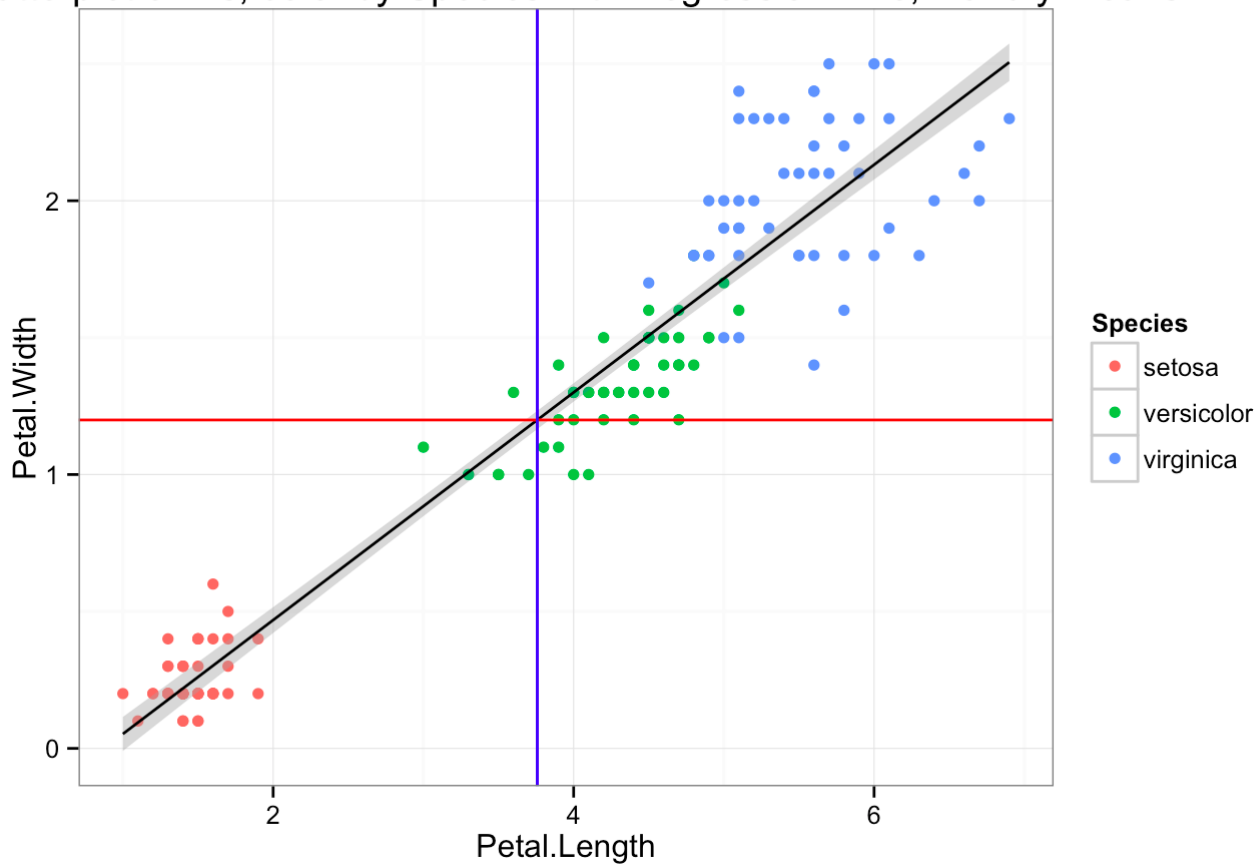
```
ggplot(iris,aes(x=Petal.Length,y=Petal.Width))+geom_point(aes(color=Species))+labs(title="
catterplot of Iris, color by Species with Regression Line, no SE")+geom_smooth(method="lm",colour="black",formula=y~x)+theme_bw()
```

Scatterplot of Iris, color by Species with Regression Line, no SE



```
ggplot(iris,aes(x=Petal.Length,y=Petal.Width))+geom_point(aes(color=Species))+labs(title="
catterplot of Iris, color by Species with Regression Line, x and y means")+geom_smooth(m
ethod="lm",colour="black",formula=y~x)+theme_bw()+geom_hline(yintercept=mean(iris$Petal.
Width),color="red")+geom_vline(xintercept=mean(iris$Petal.Length),color="blue")
```

scatterplot of Iris, color by Species with Regression Line, x and y means



6.

A.

```
STOCKS4 <- read.csv("~/Desktop/STOCKS4.csv", stringsAsFactors=FALSE)
head(STOCKS4)
```

```
##      AAPL      DIS      HD      MCD      DATE1
## 1 119.50 113.74 123.64 112.25 2015-10-30
## 2 120.53 115.04 123.63 112.62 2015-10-29
## 3 119.27 114.34 123.82 112.94 2015-10-28
## 4 114.55 113.77 124.47 111.64 2015-10-27
## 5 115.28 113.52 125.01 112.18 2015-10-26
## 6 119.08 113.09 124.61 112.59 2015-10-23
```

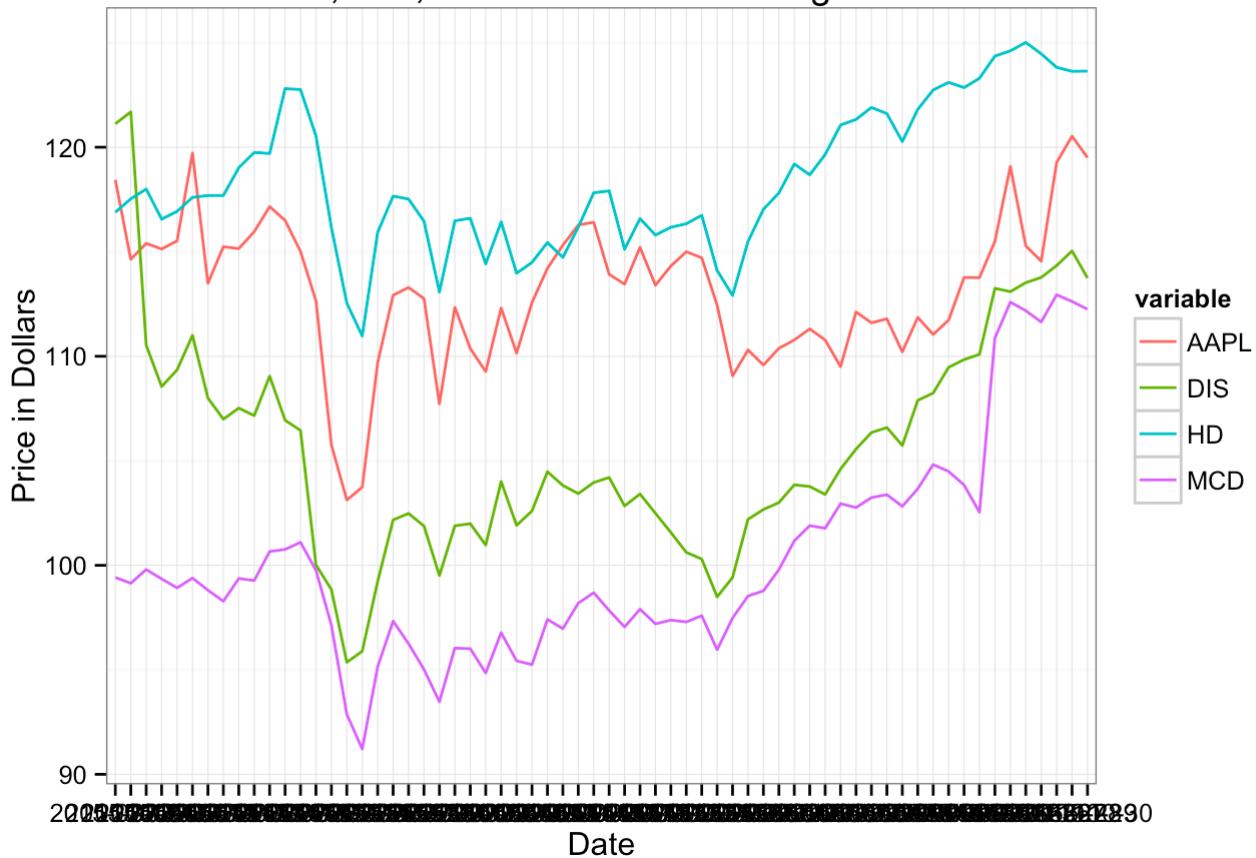
```
STOCKS4_new <- gather(STOCKS4, key=variable, value=value, AAPL, DIS, HD, MCD)
head(STOCKS4_new)
```



```
##      DATE1 variable  value
## 1 2015-10-30      AAPL 119.50
## 2 2015-10-29      AAPL 120.53
## 3 2015-10-28      AAPL 119.27
## 4 2015-10-27      AAPL 114.55
## 5 2015-10-26      AAPL 115.28
## 6 2015-10-23      AAPL 119.08
```

```
ggplot(STOCKS4_new, aes(x=DATE1, y=value, group=variable)) + geom_line(aes(col=variable)) + theme_bw() + xlab("Date") + ylab("Price in Dollars") + ggtitle("Stock Prices of AAPL, DIS, HD and MCD from August 1st to November 1st")
```

Stock Prices of AAPL, DIS, HD and MCD from August 1st to November 1st



B.

```
load("~/Desktop/repPolls.rdata")
head(repPolls)
```

##	Poll	Donald Trump	Ben Carson	Marco Rubio	Ted Cruz	Jeb Bush
## 1	2015-11-04	23%	24%	12%	8%	8%
## 2	2015-11-03	26%	23%	11%	11%	4%
## 3	2015-11-02	24%	23%	14%	13%	4%
## 4	2015-10-29	23%	29%	11%	10%	8%
## 5	2015-10-30	28%	23%	11%	6%	6%
## 6	2015-10-25	22%	26%	8%	4%	7%

##	John Kasich	Rand Paul	Carly Fiorina	Mike Huckabee	Chris Christie
## 1	4%	5%	3%	3%	2%
## 2	4%	4%	3%	4%	2%
## 3	3%	2%	3%	1%	3%
## 4	3%	2%	3%	3%	3%
## 5	1%	2%	3%	1%	1%
## 6	4%	4%	7%	4%	1%

##	Unsure or Other
## 1	5%
## 2	7%
## 3	9%
## 4	5%
## 5	15%
## 6	9%

```

names(repPolls) <- c("Poll", "Donald", "Ben", "Marco", "Ted", "Jeb", "John", "Rand", "Carly", "Mike", "Chris", "Unsure")
repPolls_new <- gather(repPolls, key=variable, value=value, Donald, Ben, Marco, Ted, Jeb, John, Rand, Carly, Mike, Chris, Unsure)
repPolls_new$value <- sapply(repPolls_new$value, function(x) gsub("%", "", x))
repPolls_new$value <- as.numeric(repPolls_new$value)
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Donald", "Donald Trump", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Ben", "Ben Carson", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Marco", "Marco Rubio", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Ted", "Ted Cruz", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Jeb", "Jeb Bush", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("John ", "John Kasich", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Rand ", "Rand Paul", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Carly ", "Carly Fiorina", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Mike ", "Mike Huckabee", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Chris ", "Chris Christie", x))
repPolls_new$variable <- sapply(repPolls_new$variable, function(x) gsub("Unsure", "Unsure or Other", x))
head(repPolls_new)

```

##	Poll	variable	value
## 1	2015-11-04	Donald Trump	23
## 2	2015-11-03	Donald Trump	26
## 3	2015-11-02	Donald Trump	24
## 4	2015-10-29	Donald Trump	23
## 5	2015-10-30	Donald Trump	28
## 6	2015-10-25	Donald Trump	22

```
ggplot(repPolls_new, aes(x=Poll, y=value, group=variable)) + geom_line(aes(col=variable)) + theme_bw() + xlab("Poll") + ylab("Popularity") + ggtitle("Republican Poll from October to November")
```

