Chapter 5

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Chapter 5.1

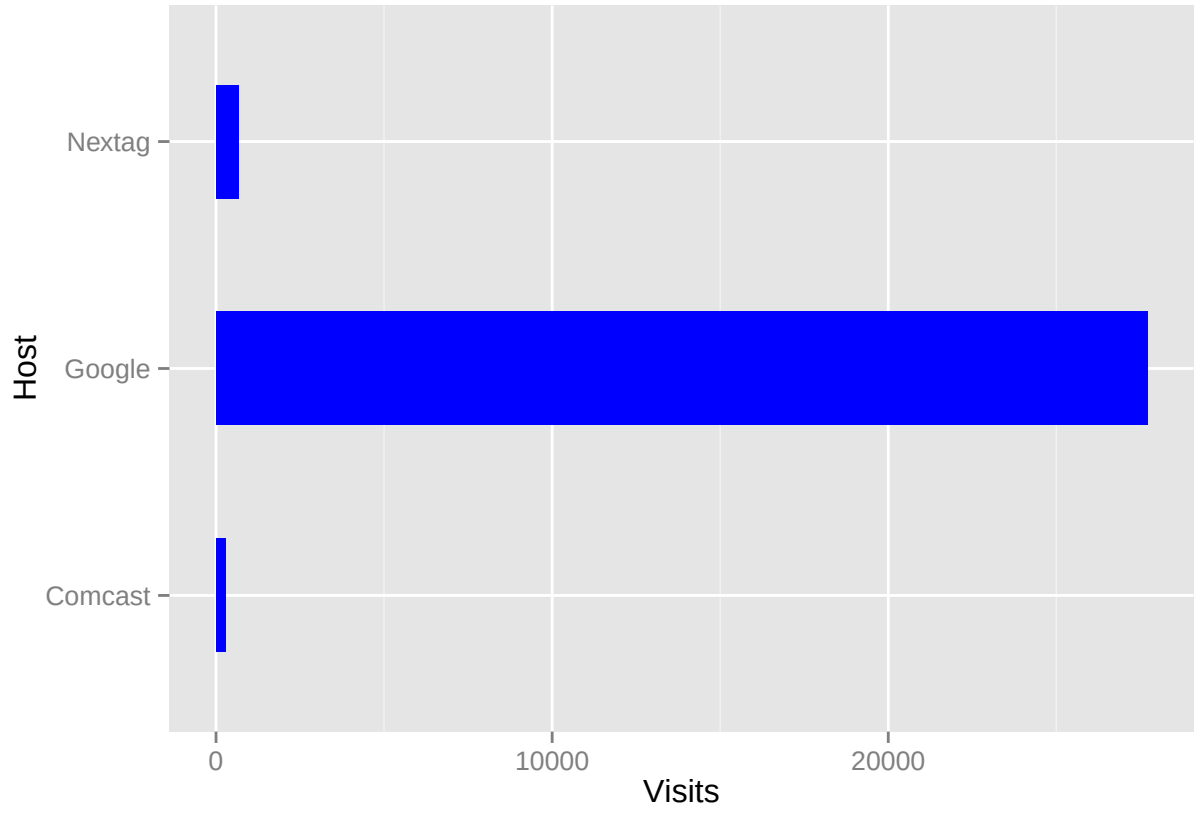
```
require(ggplot2)
```

```
## Loading required package: ggplot2
```

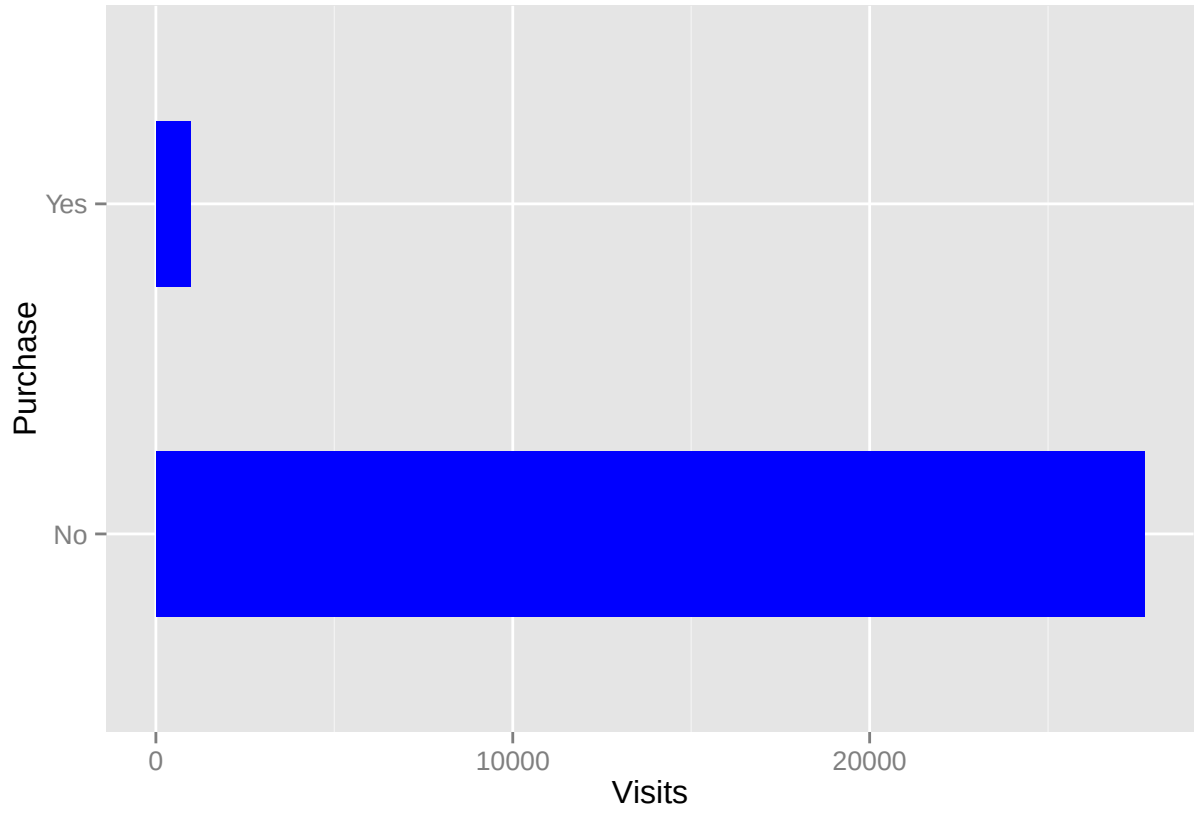
```
require(reshape2)
```

```
## Loading required package: reshape2
```

```
amazon <- read.table("C:\\Users\\Jonathan\\Google Drive\\Stats Camp\\Stine&Foster\\Data by Chapter\\Cha
                     header = TRUE,
                     sep = "\t")

ggplot(data = amazon, aes(x = Host)) +
  geom_bar(width = .5, fill = "blue") +
  coord_flip() +
  labs(x = "Host", y = "Visits")
```

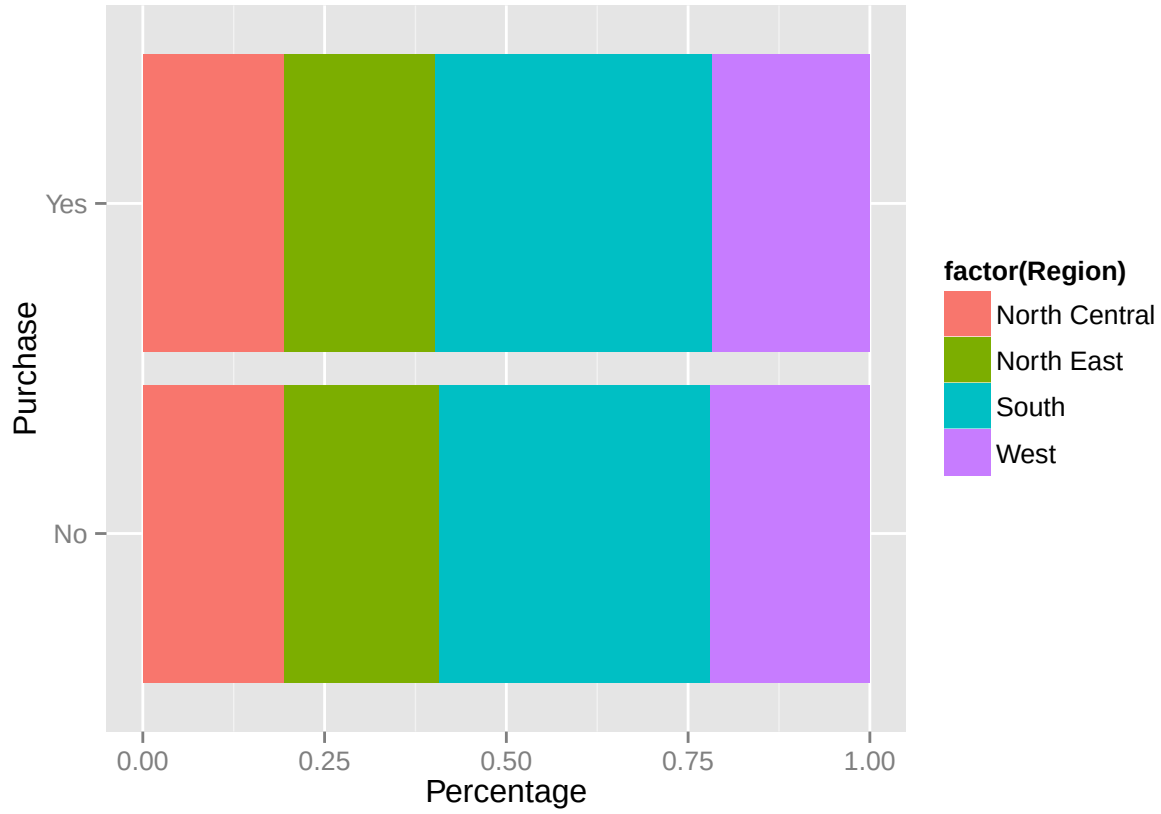


```r
ggplot(data = amazon, aes(x = Purchase)) +
  geom_bar(width = .5, fill = "blue") +
  coord_flip() +
  labs(x = "Purchase", y = "Visits")
```



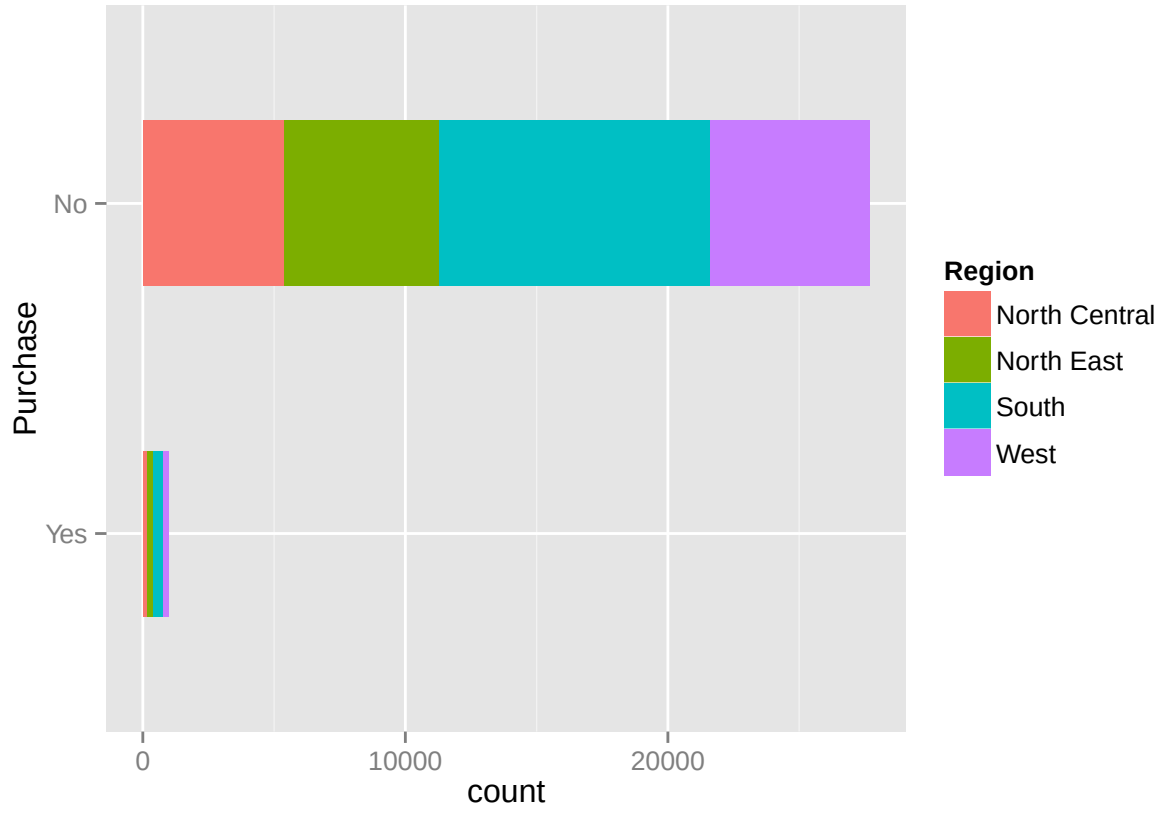
stacked bar charts Percentage

```r
c.table <- t(table(amazon$Purchase, amazon$Region))
c.table[,1] <- c.table[,1] / sum(c.table[,1])
c.table[,2] <- c.table[,2] / sum(c.table[,2])
c.table <- as.data.frame(c.table)
names(c.table) <- c("Region", "Purchase", "Percentage")

ggplot(data = c.table, aes(x = Purchase, y = Percentage, fill = factor(Region))) +
  geom_bar(stat = "identity") +
  coord_flip()
```



Stacked bar Charts: Counts

```
amazon$Purchase <- factor(amazon$Purchase, levels = rev(levels(amazon$Purchase)))

ggplot(data = amazon, aes(x = Purchase, fill = Region)) +
  geom_bar(stat = "bin", width = .5) +
  coord_flip()
```

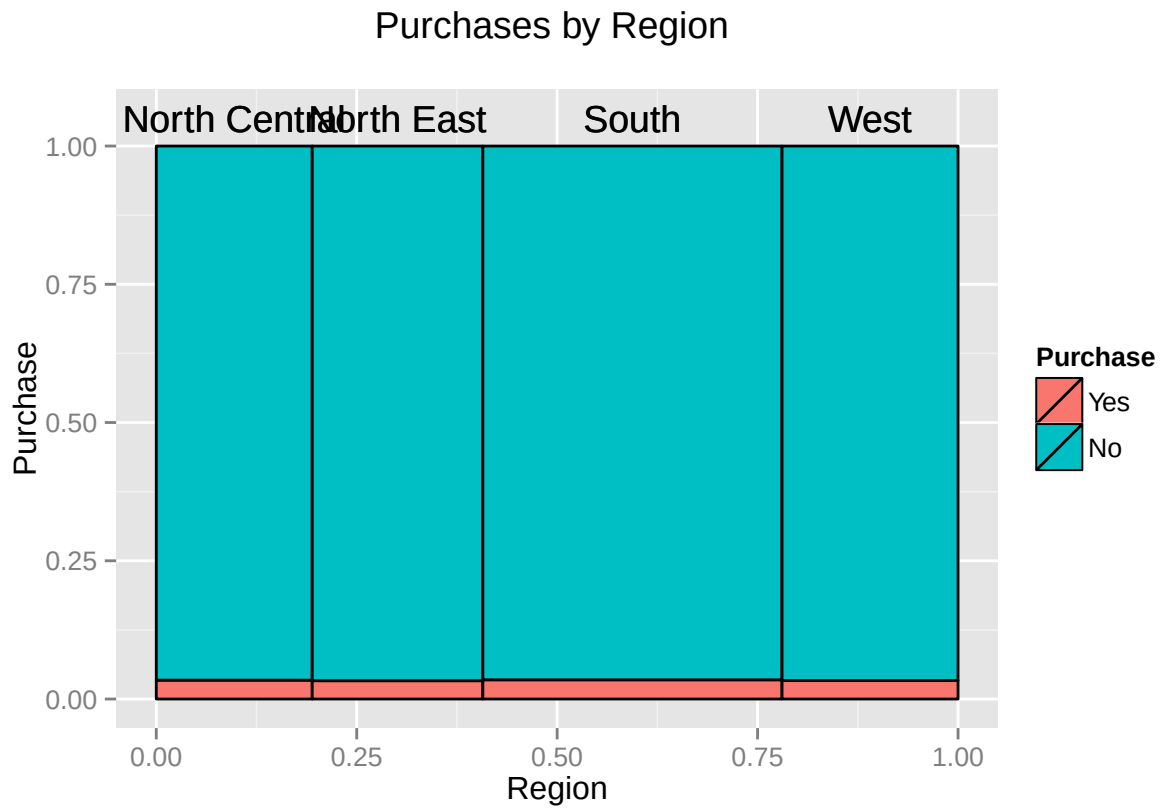


Mosaic plot for amazon and shirts

```
shirts <- read.table("C:\\Users\\Jonathan\\Google Drive\\Stats Camp\\Stine&Foster\\Data by Chapter\\Cha

# function thanks to stack overflow
####################################

ggMMplot <- function(var1, var2, Title = "Title", xlab = "xlab", ylab = "ylab"){
  levVar1 <- length(levels(var1))
  levVar2 <- length(levels(var2))

  jointTable <- prop.table(table(var1, var2))
  plotData <- as.data.frame(jointTable)
  plotData$marginVar1 <- prop.table(table(var1))
  plotData$var2Height <- plotData$Freq / plotData$marginVar1
  plotData$var1Center <- c(0, cumsum(plotData$marginVar1)[1:levVar1 -1]) +
    plotData$marginVar1 / 2

  ggplot(plotData, aes(var1Center, var2Height)) +
    geom_bar(stat = "identity", aes(width = marginVar1, fill = var2), col = "Black") +
    labs(x = xlab, y = ylab, title = Title) +
    geom_text(aes(label = as.character(var1), y = 1.05)) +
    guides(fill=guide_legend(title= ylab))
  }

# Amazon Graph
```

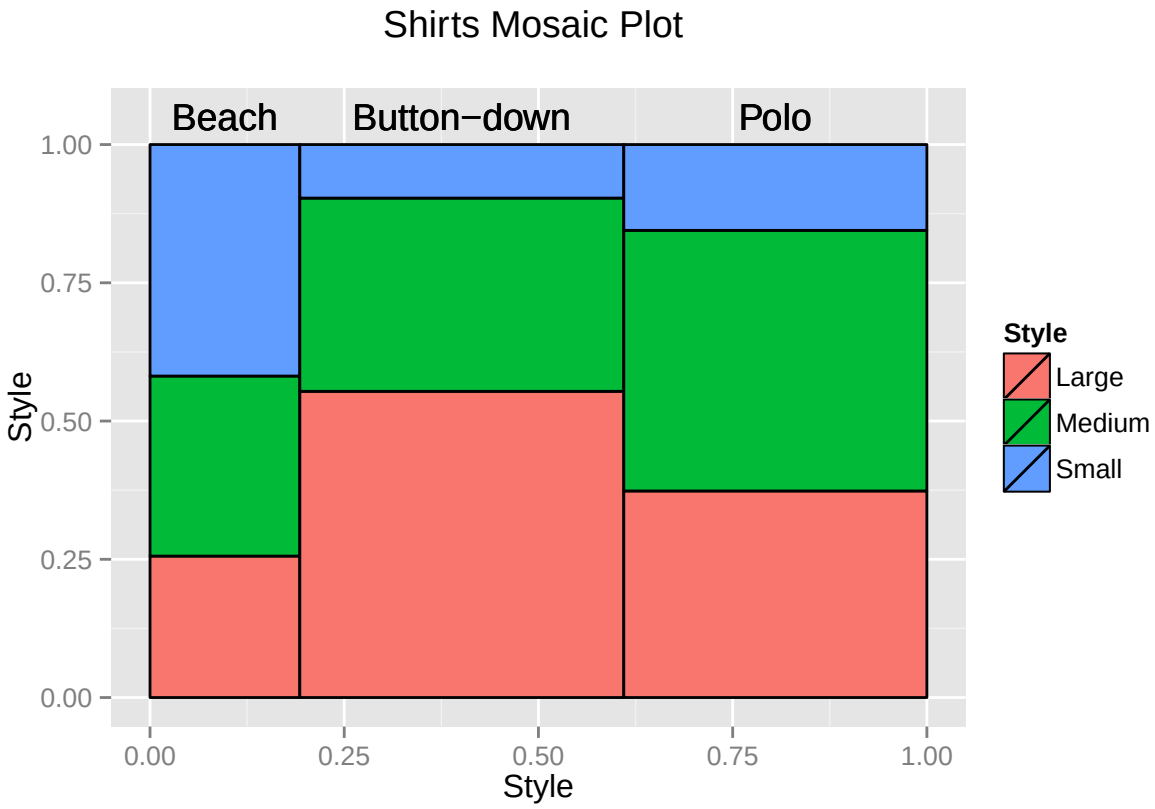
```
#####

ggMMplot(amazon$Region, amazon$Purchase, "Purchases by Region \n", "Region", "Purchase")
```

```
## Warning in loop_apply(n, do.ply): position_stack requires constant width:
## output may be incorrect
```




```
# Shirts graph
######

ggMMplot(shirts$Style, shirts$Size, "Shirts Mosaic Plot \n", "Style", "Style")
```

```
## Warning in loop_apply(n, do.ply): position_stack requires constant width:
## output may be incorrect
```


Shirts Mosaic Plot
Beach
Button−down
Polo
1.00
0.75
0.50
0.25
0.00
Style
0.00
0.25
0.50
0.75
1.00
Style
Style
Large
Medium
Small