Week 1 & 2

Code

Hide

```
library(ggplot2)
```

```
Learn more about the underlying theory at https://ggplot2-book.org/
```

Hide

```
library(tidyverse)
```

```
Registered S3 methods overwritten by 'dbplyr':
  method         from
  print.tbl_lazy
  print.tbl_sql
-- Attaching packages --------------------------------------------------------------------------
------------------------------------------------------------ tidyverse 1.3.1 --
v tibble  3.1.6     v dplyr   1.0.7
v tidyr   1.1.4     v stringr 1.4.0
v readr   2.1.0     v forcats 0.5.1
v purrr   0.3.4
-- Conflicts -----------------------------------------------------------------------------------
------------------------------------------------------- tidyverse_conflicts() --
x dplyr::filter() masks stats::filter()
x dplyr::lag()    masks stats::lag()
```

Hide

```
library(readxl)
library(tidyr)
library(dplyr)
```

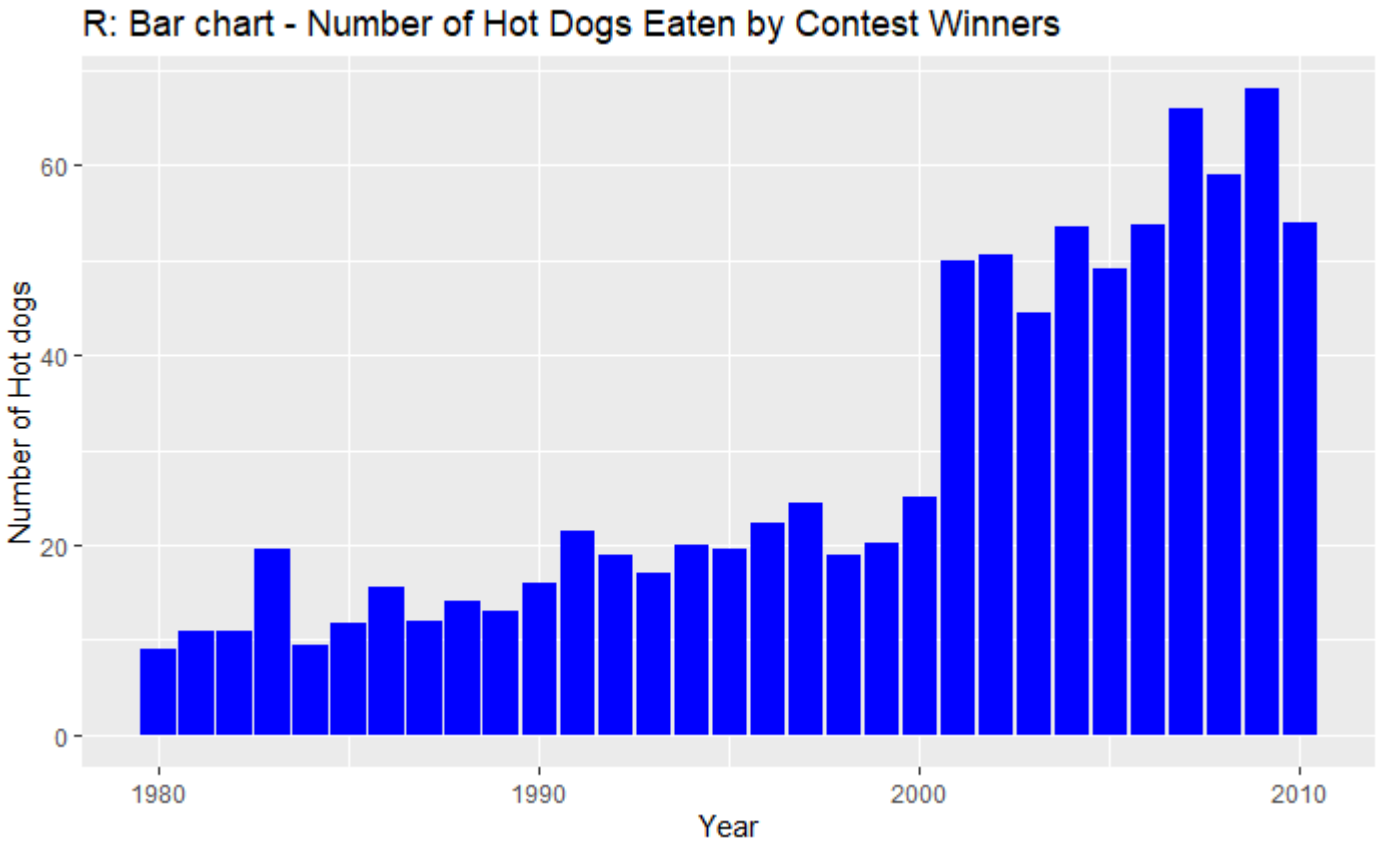
Hide

```
data = read_excel("C:\\Users\\longr\\Documents\\DSC 640\\Week 1 & 2\\hotdog-contest-winners.xls
m")
```

Hide

```
#Bar Plot in R
ggplot(data=data, aes(x=Year, y=Dogs_eaten))+
  geom_bar(stat="identity",fill="blue")+
  ggtitle("R: Bar chart - Number of Hot Dogs Eaten by Contest Winners")+
  xlab("Year")+ylab("Number of Hot dogs")

ggsave('R Bar chart.png')
```

```
Saving 7.29 x 4.5 in image
```



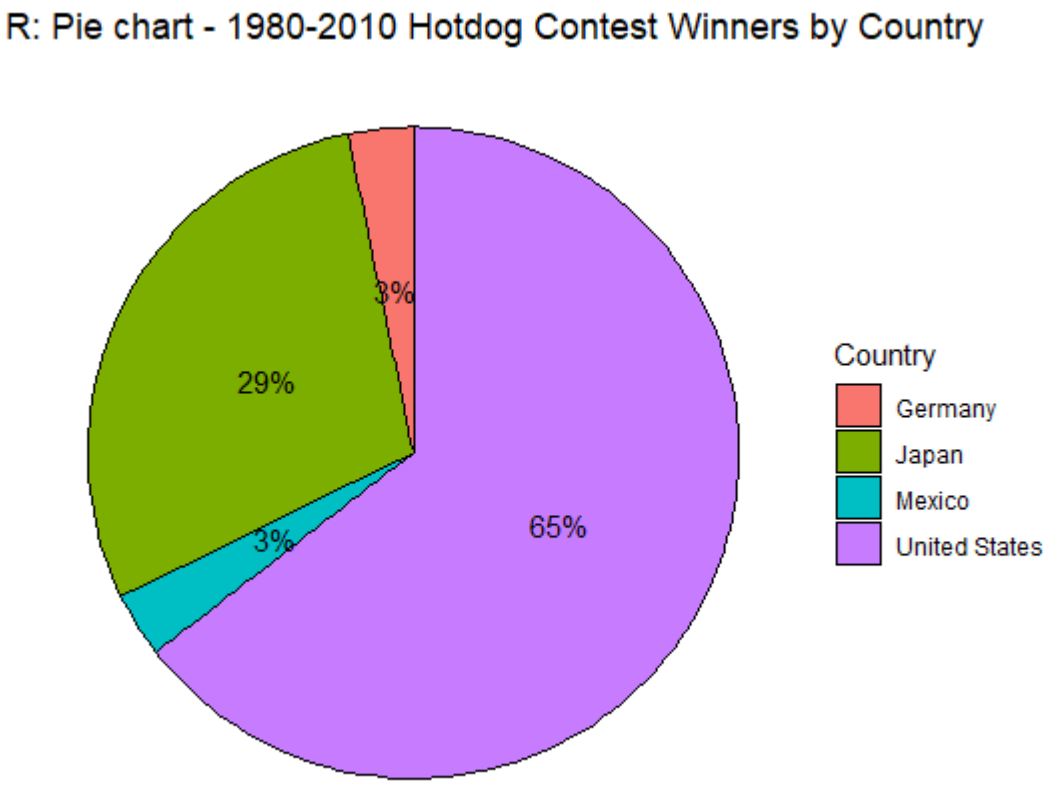
Hide

```
#create table count by country
counts = data %>% count(Country)
```

Hide

```
# Pie chart in R

# reference: https://r-charts.com/part-whole/pie-chart-percentages-ggplot2/
counts <- counts %>%
  mutate(perc = `n` / sum(`n`)) %>%
  arrange(perc) %>%
  mutate(labels = scales::percent(perc))


#plot pie chart
ggplot(counts, aes(x="", y=n, fill=Country)) +
  geom_bar(stat="identity", width=1,color="black") +
  coord_polar("y", start=0)+
  theme_void()+
  geom_text(aes(label = labels),
            position = position_stack(vjust = 0.5))+
  ggtitle("R: Pie chart - 1980-2010 Hotdog Contest Winners by Country")

ggsave('R Pie chart.png')
```

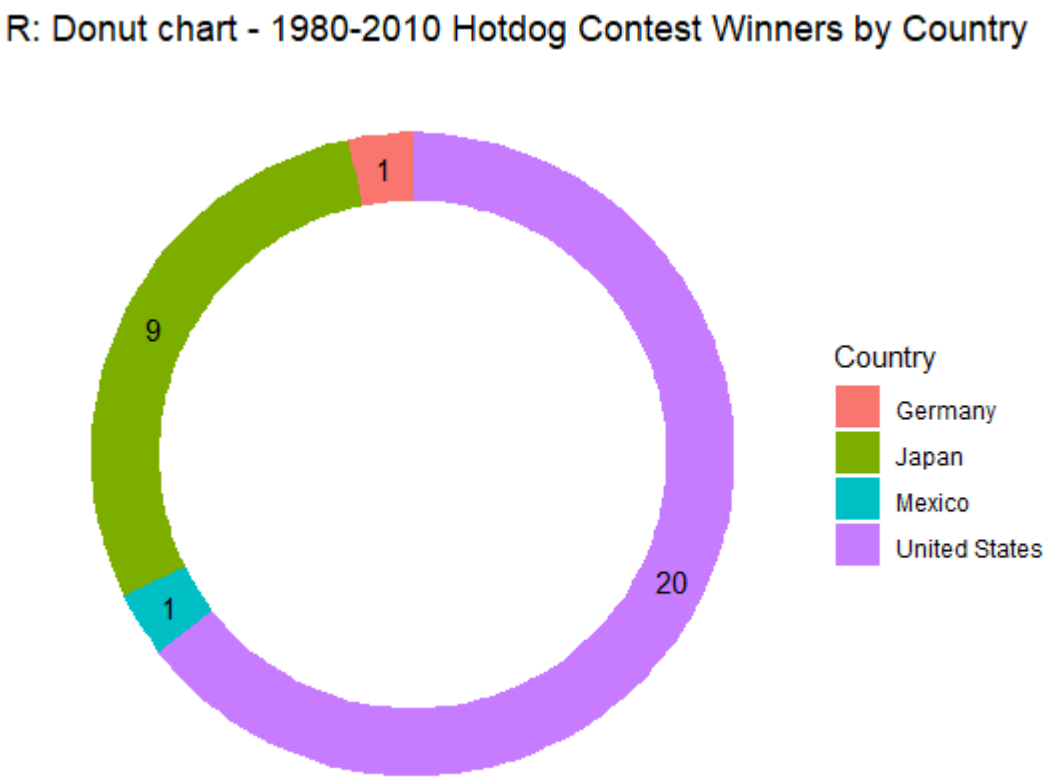
```
Saving 7.29 x 4.5 in image
```



Hide

```
# Donut chart in R

#ref: https://r-charts.com/part-whole/donut-chart-ggplot2/#basic

#hole size
hsize <- 4

counts <- counts %>%
  mutate(x = hsize)

#plot
ggplot(counts, aes(x = hsize, y = n, fill = Country)) +
  geom_col() +
  geom_text(aes(label = n),
            position = position_stack(vjust = 0.5)) +
  coord_polar(theta = "y") +
  xlim(c(0.2, hsize + 0.5)) +
  ggtitle("R: Donut chart - 1980-2010 Hotdog Contest Winners by Country")+
  theme_void()
ggsave('R Donut chart.png')
```

```
Saving 7.29 x 4.5 in image
```



Hide

```
#import the obama data
data2 = read_excel("C:\\Users\\longr\\Documents\\DSC 640\\Week 1 & 2\\obama-approval-ratings.xl
s")
```

Hide

```
#create a pivot for the stacked bar chart
pivot <- pivot_longer(data2, Approve:Disapprove:None, names_to = "Rating", values_to = "Number")
```

```
Warning in x:y :
  numerical expression has 2 elements: only the first used
```

Hide

```
# Stacked Bar Chart in R

# Reference: https://www.r-graph-gallery.com/48-grouped-barplot-with-ggplot2.html

ggplot(pivot, aes(fill=Rating, y=Number, x=Issue)) +
  geom_bar(position="stack", stat="identity") +
  theme(axis.text.x=element_text(angle=90,hjust=1)) +
  xlab("Issues")+ylab("Percent")+
  ggtitle("R: Stacked Bar chart - President Obama Approval Ratings by Issue")
ggsave('R Stacked Bar Chart.png')
```

```
Saving 7.29 x 4.5 in image
```