1. Visualizing Amounts and Distributions

```
setwd("D:/DSA0613")
getwd()
tips <- read.csv("tips.csv")
head(tips)
#import libraries
library(ggplot2)
library(dplyr)
library(ggridges)
#Bar plot
ggplot(tips, aes(x = day, y = tip, fill = day)) +
  stat_summary(fun = mean, geom = "bar") +
  labs(title = "Average Tip by Day",
       x = "Day",
       y = "Average Tip") +
  theme_minimal()
#Grouped Bar Plot
ggplot(tips, aes(x = day, y = tip, fill = gender)) +
  stat_summary(fun = mean, geom = "bar", position = "dodge")
#Stacked bar plot
ggplot(tips, aes(x = day, y = tip, fill = gender)) +
  stat_summary(fun = sum, geom = "bar")
#Dot plot
ggplot(tips, aes(x = tip, y = day)) +
  geom_point()
```

#Heatmap

```
ggplot(tips, aes(x = day, y = time, fill = tip)) +
  stat_summary(fun = mean, geom = "tile")
```

#Violin Plot

```
ggplot(tips, aes(x = day, y = tip)) +
  geom_violin(fill = "lightgreen")
```

#Ridgeline Plot

```
ggplot(tips, aes(x = tip, y = day)) +
  geom_density_ridges()
```

#Histogram

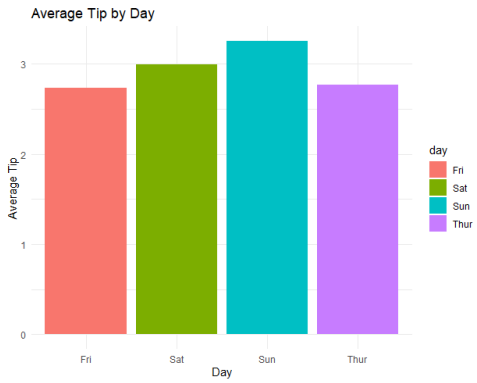
```
ggplot(tips, aes(x = tip)) +
  geom_histogram(binwidth = 1, fill = "red", color = "black")
```

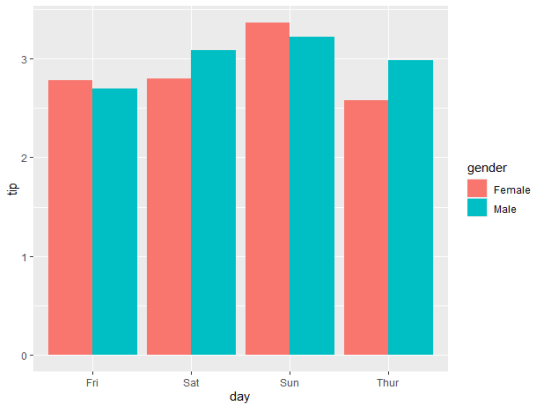
#Density Plot

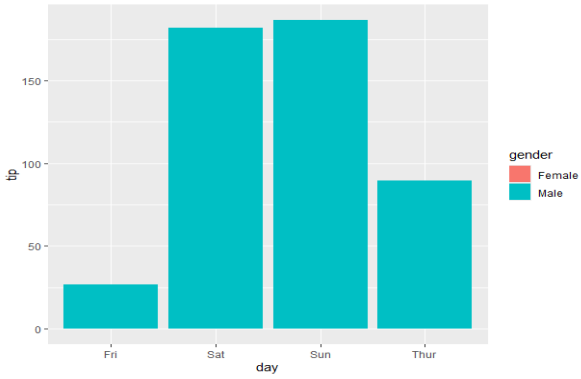
```
ggplot(tips, aes(x = tip)) +
  geom_density(fill = "skyblue")
```

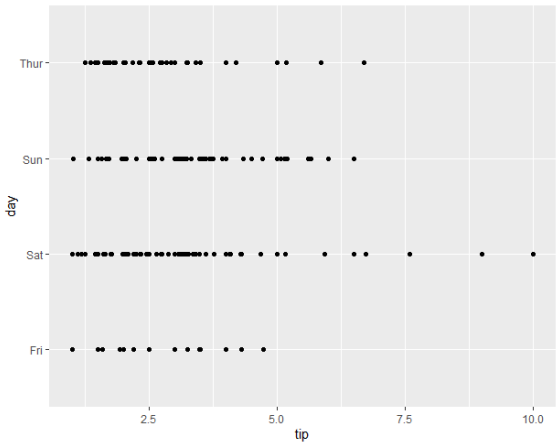
#Boxplot

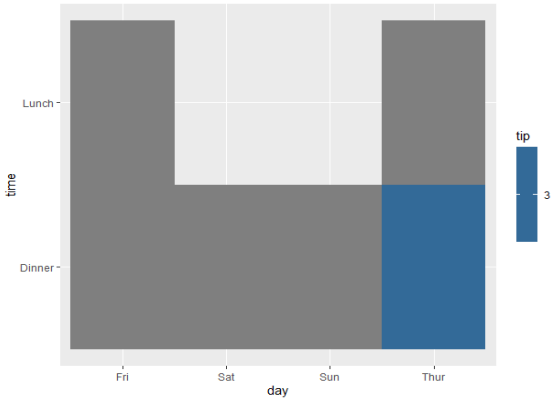
```
ggplot(tips, aes(x = day, y = tip)) +
  geom_boxplot()
```

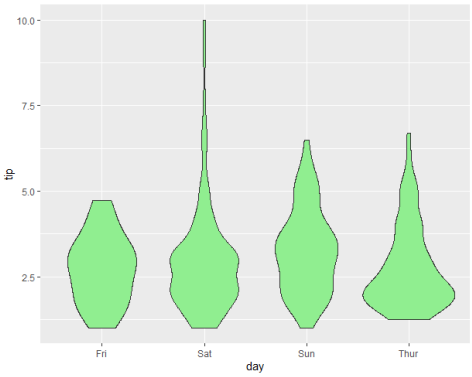


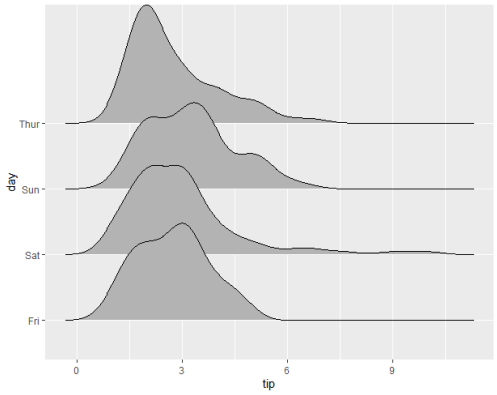


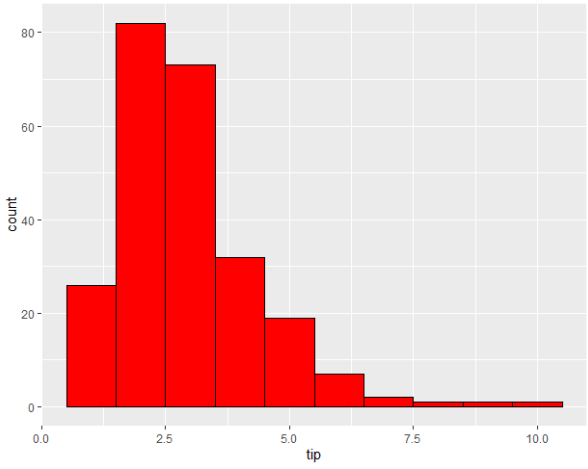

tip
150
100
50
0
Fri
Sat
Sun
Thur
day
gender
Female
Male

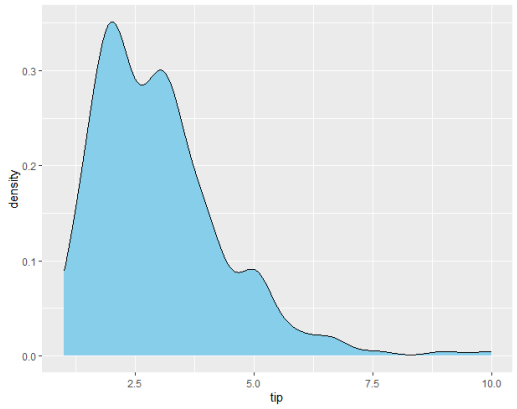

Thur
Sun
Sat
Fri
day
2.5
5.0
7.5
10.0
tip

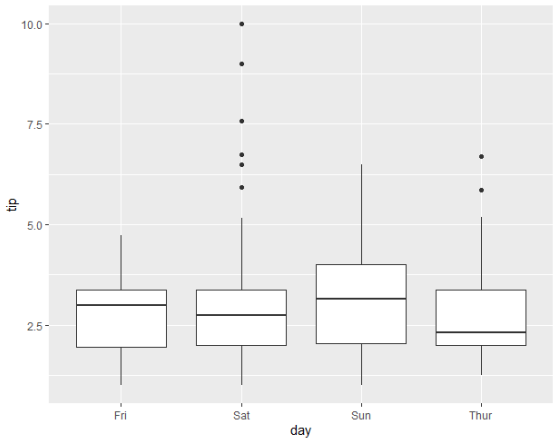

Lunch
Dinner
time
tip
3
Fri
Sat
Sun
Thur
day


10.0
7.5
5.0
2.5
tip
Fri
Sat
Sun
Thur
day


Thur
Sun
Sat
Fri
day
0
3
6
9
tip


80
60
40
20
0
count
0.0
2.5
5.0
7.5
10.0
tip


density
0.3
0.2
0.1
0.0
2.5
5.0
7.5
10.0
tip


tip
10.0
7.5
5.0
2.5
Fri
Sat
Sun
Thur
day