

DATA VISUALIZATION

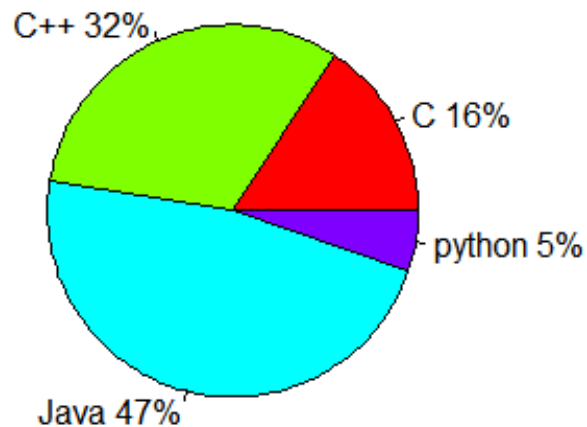
Consider the following data set and visualize it in the form of a Pi-Chart in Python with an appropriate title.

C	C++	Java	Python
15	35	45	05

Code:

```
slices <- c(15, 30, 45, 05)
lbls <- c("C", "C++", "Java", "python")
pct <- round(slices/sum(slices)*100)
lbls <- paste(lbls, pct) # add percents to labels
lbls <- paste(lbls,"%",sep="") # ad % to labels
pie(slices,labels = lbls, col=rainbow(length(lbls)),
    main="Skill Set of My Team")
```

Skill Set of My Team



NHAI DATASET:

LINK WAS NOT WORKING, DATASET COULDN'T BE DOWNLOADED. HENCE NOT ABLE TO MAKE A PLOT.

TITANIC DATASET

PLOT1: HISTOGRAM

This plot helps us to visualize the fares paid by passengers. It also helps us to compare the fares among males and females.

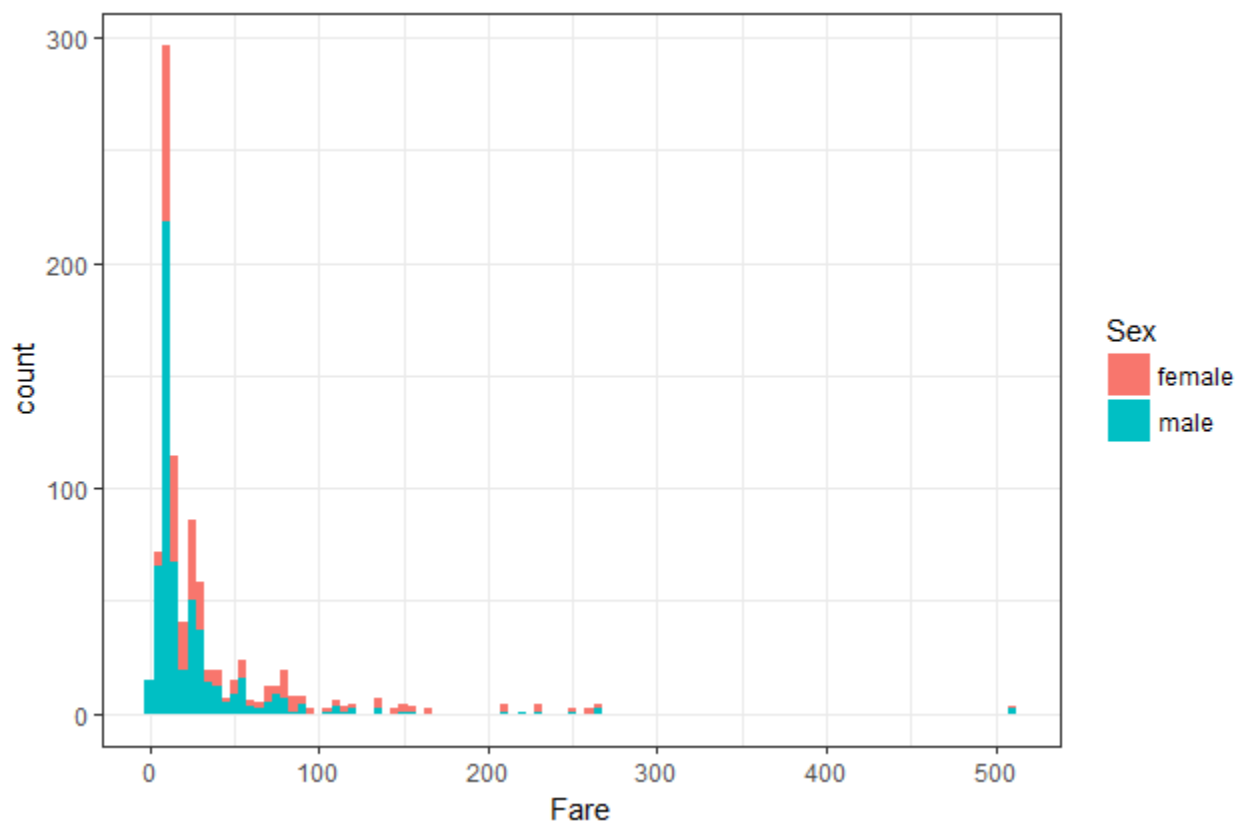
```
Poptions(scipen = 999) # turn-off scientific notation like 1e+48
```

```
library(ggplot2)
```

```
theme_set(theme_bw()) # pre-set the bw theme.
```

```
ggplot(data = Titanic, mapping = aes(x=Fare,fill=Sex))
```

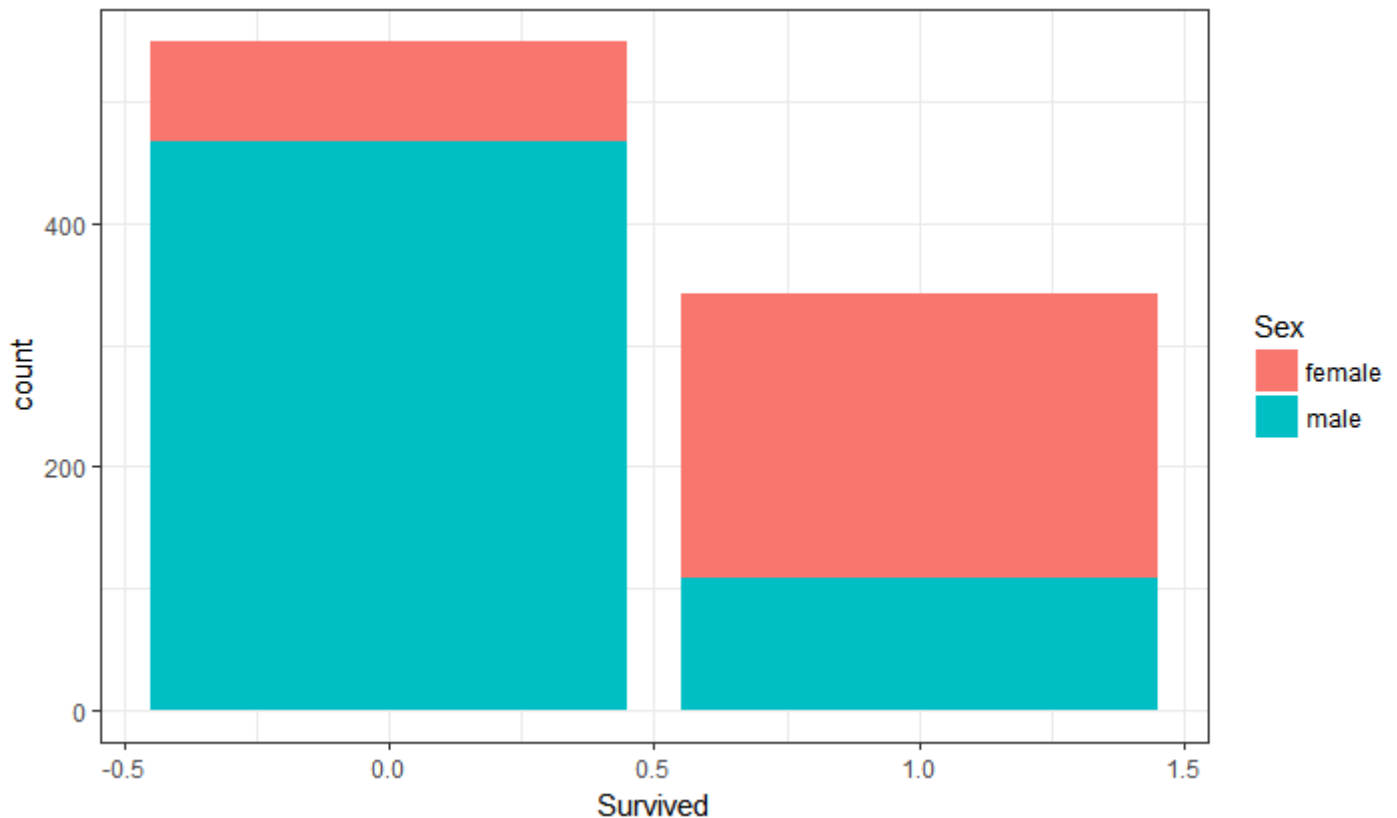
```
+geom_histogram(binwidth = 5)
```



PLOT 2: STACKED BAR GRAPH

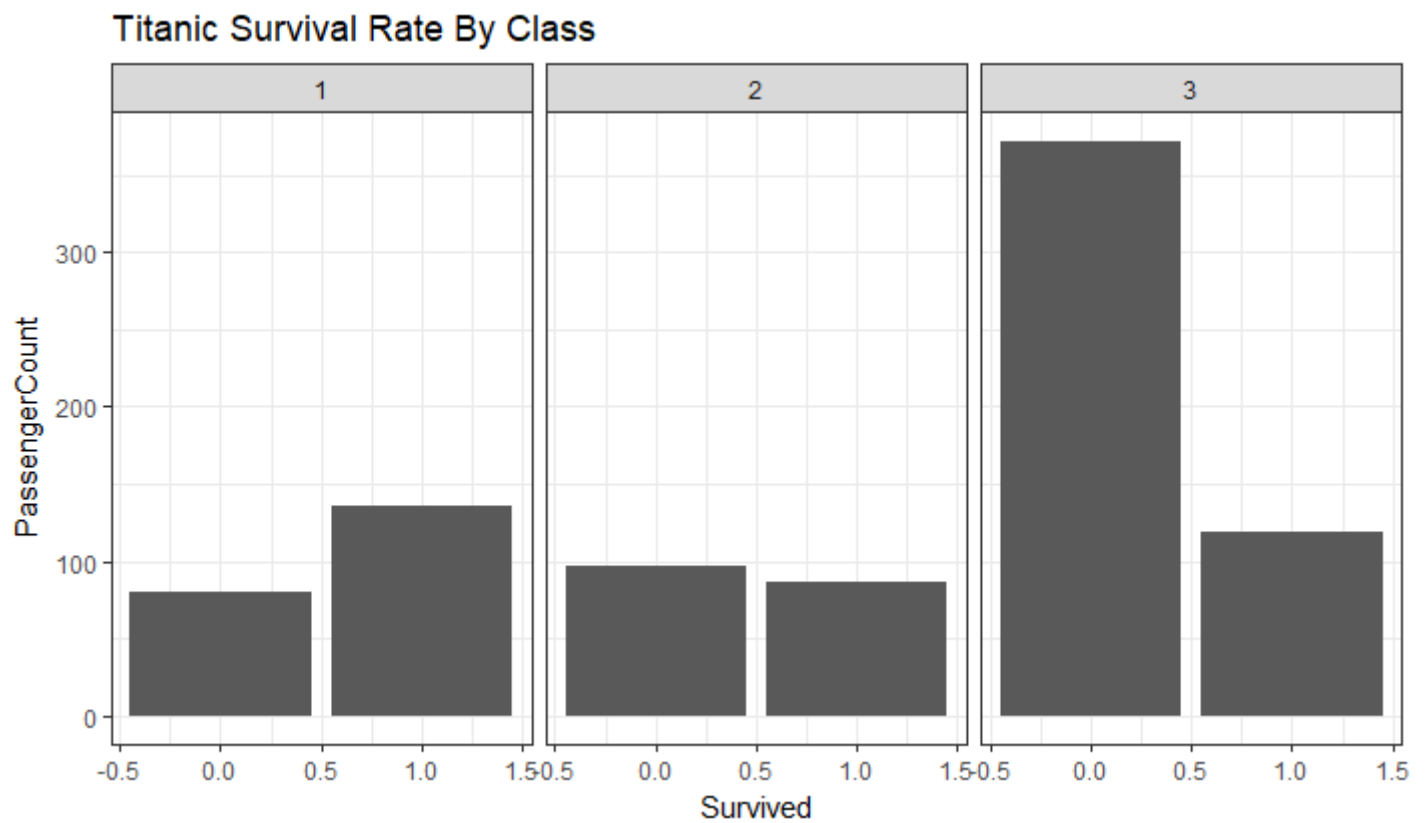
This plot helps us to visualize the total number of passengers that survived. 0 denotes people who passed away and 1 denotes the people who survived.

```
library(ggplot2)
ggplot(data=Titanic,mapping = aes(x=Survived,fill=Sex))
+geom_bar()
```

**PLOT 3: BAR GRAPH**

This plot helps us to visualize the total passengers that passed away vs those that survived, segregated by the class.

```
library(ggplot2)
ggplot(Titanic,mapping=aes(x=Survived,Fill=Sex))
+theme_bw()
+facet_wrap(~Pclass)
+geom_bar()
+labs(y="PassengerCount",title="Titanic Survival Rate By Class")
```

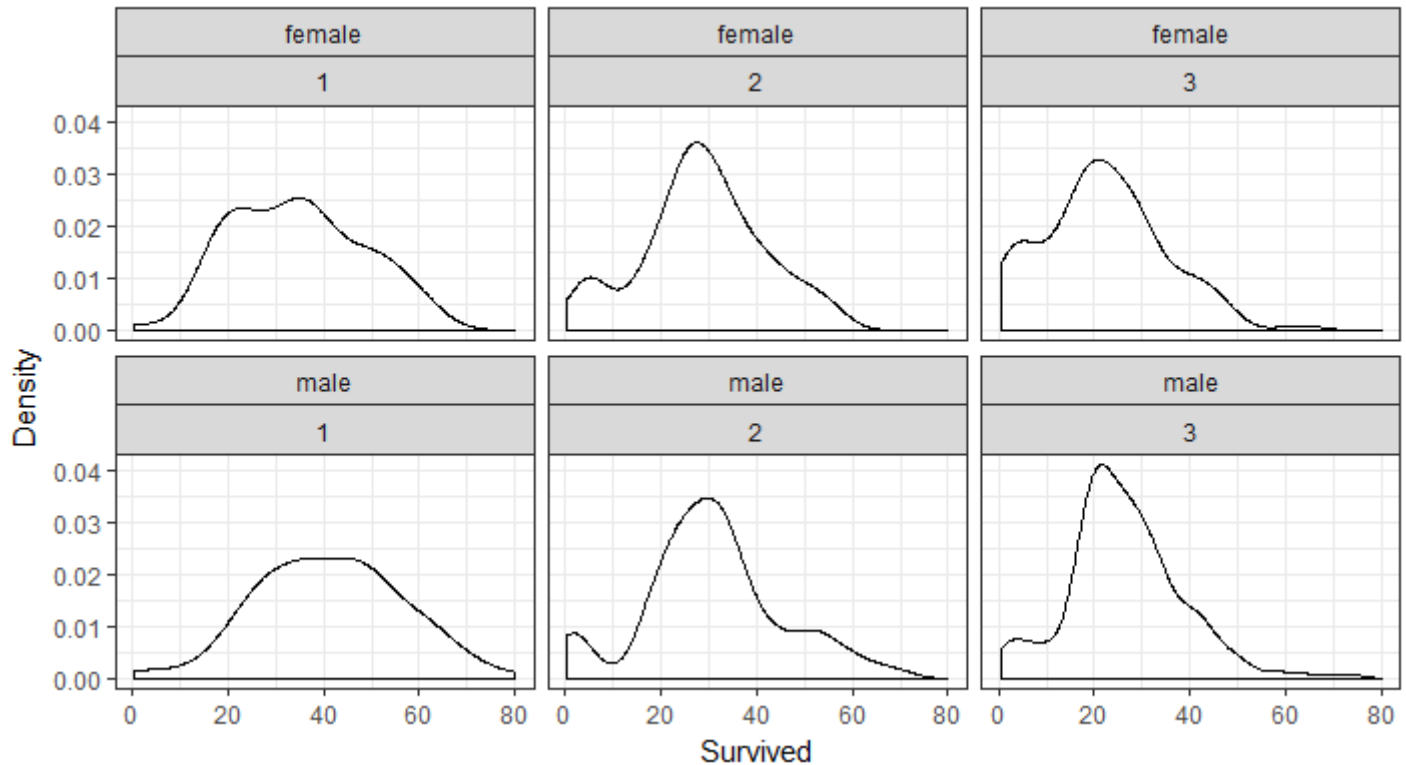


PLOT 4: DENSITY FUNCTION

This plot gives the density function of the passengers segregated by gender and class.

```
library(ggplot2)
ggplot(Titanic,aes(x=Age,fill=Survived))
+theme_bw()
+facet_wrap(Sex~Pclass)
+geom_density(alpha=0.5)
+labs(y="Density",x="Survived",title="Titanic Survival rate by Age,Pclass and Sex")
```

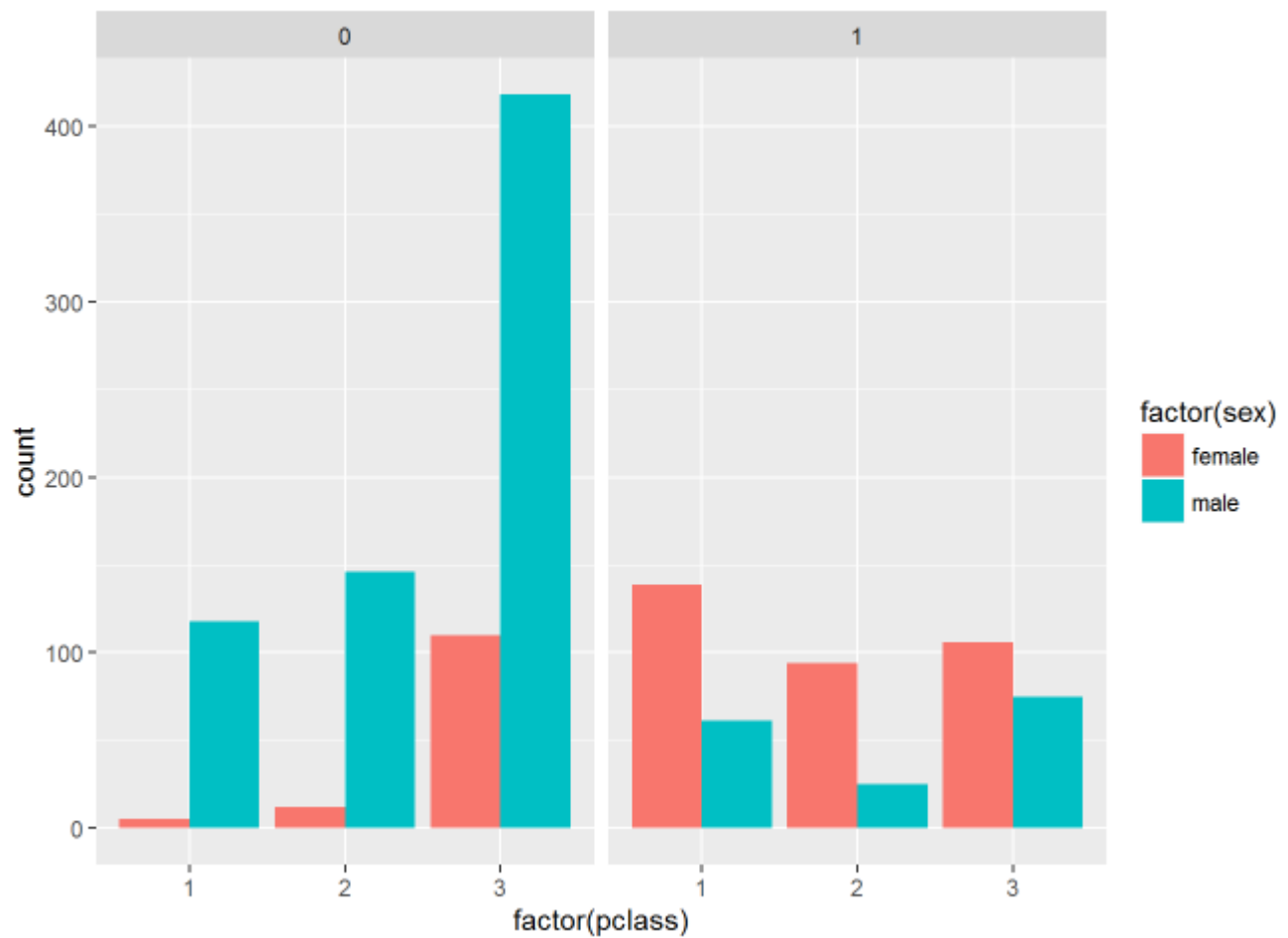
Titanic Survival rate by Age,Pclass and Sex



PLOT 5: BAR GRAPH WITH DODGE

This plot helps us to visualize the number of passengers who survived and those who passed away segregated by the gender and class. 0 denotes people who passed away and 1 denotes the people who survived.

```
library(ggplot2)
ggplot(titanic,aes(x=factor(pclass),fill=factor(sex)))+
  geom_bar(position="dodge")+
  facet_grid(". ~ survived")
```



PLOT 6: JITTER PLOT

This plot helps us to clearly visualize the age vs gender and class of the passengers who passed away and those who survived.

```
posn.j <- position_jitter(0.5, 0)
ggplot(titanic,aes(x=factor(pclass),y=age,col=factor(sex)))+
  geom_jitter(size=3,alpha=0.5,position=posn.j)+
  facet_grid(". ~ survived")
```

