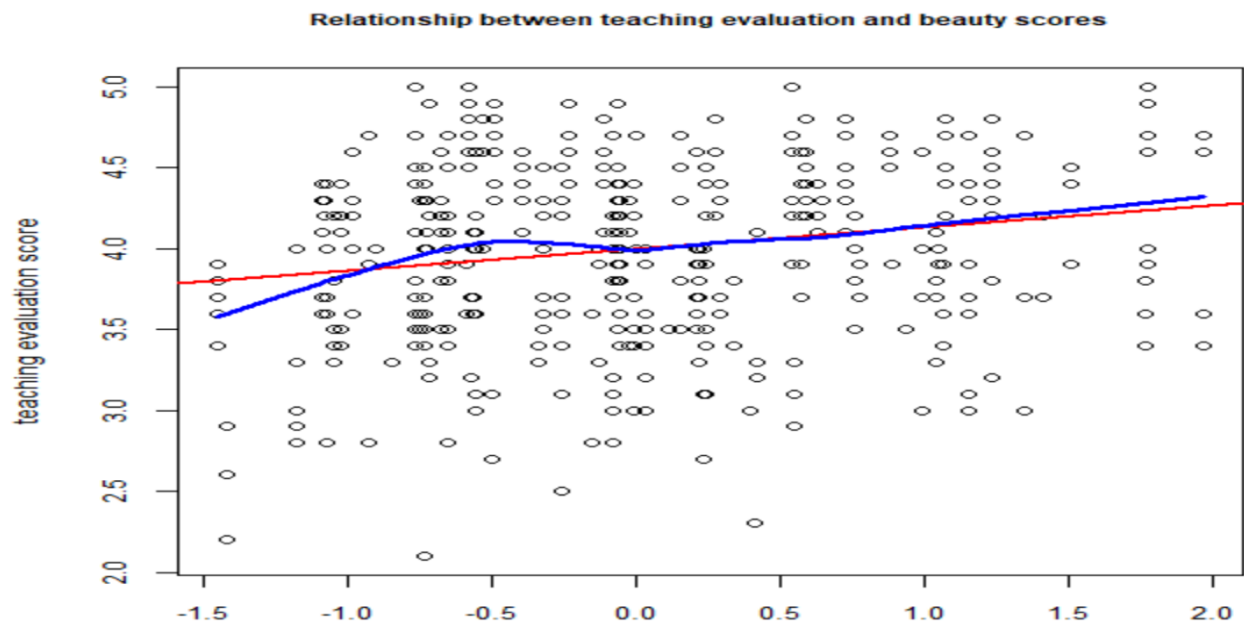


Data Visualization using Teaching ratings dataset

1. Plot teaching evaluation and beauty scores

```
#plot eval and beauty
plot(eval~beauty,
     main = "Relationship between teaching evaluation and beauty scores",
     xlab = "standardized beauty scores of instructors",
     ylab="teaching evaluation score",
     cex.main=0.75, cex.lab=0.9, cex.axis=0.8)
abline(lm(eval~beauty),col="red",lwd=2) #regression line (y~x)
lines(lowess(eval~beauty),col="blue",lwd=3) #lowess line (x~y)
```

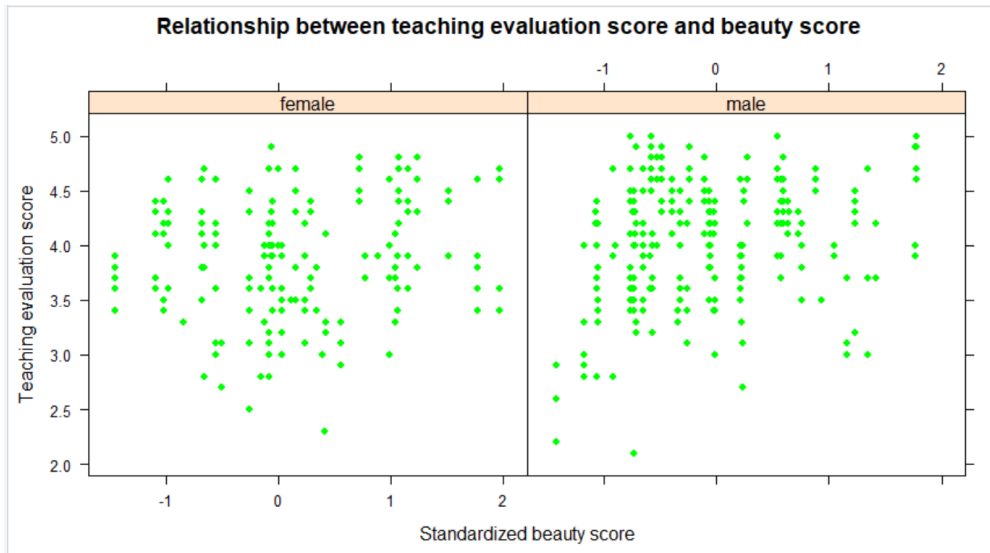


2. Relationship between teaching evaluation and beauty score using lattice plots

```
install.packages("lattice")
library(lattice)

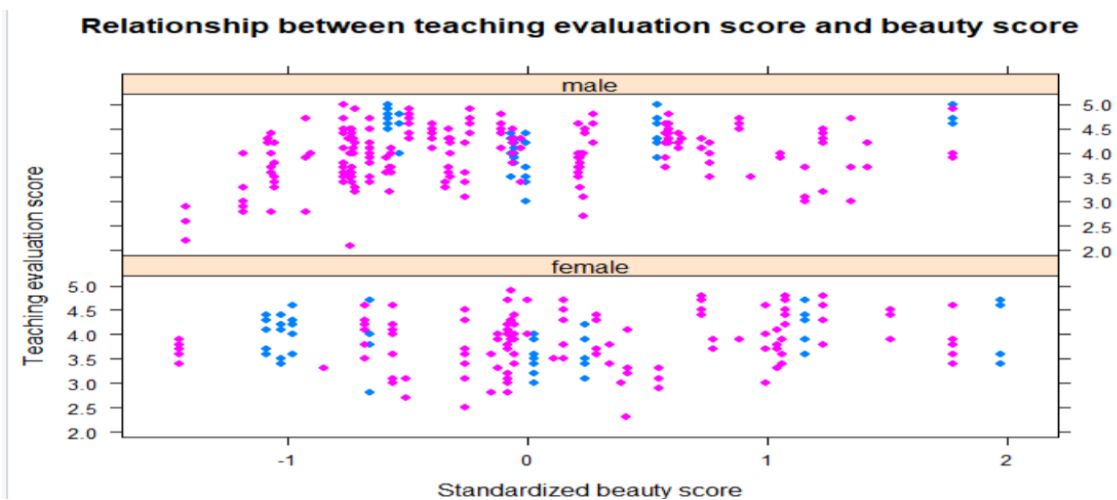
attach(teachingratings)

xyplot(eval~beauty|gender, pch=19, col="green",
       main= "Relationship between teaching evaluation score and beauty score",
       ylab = "Teaching evaluation score",
       xlab = "standardized beauty score")
```



3. Relationship between teaching evaluation and beauty score stratified by tenure using lattice plots

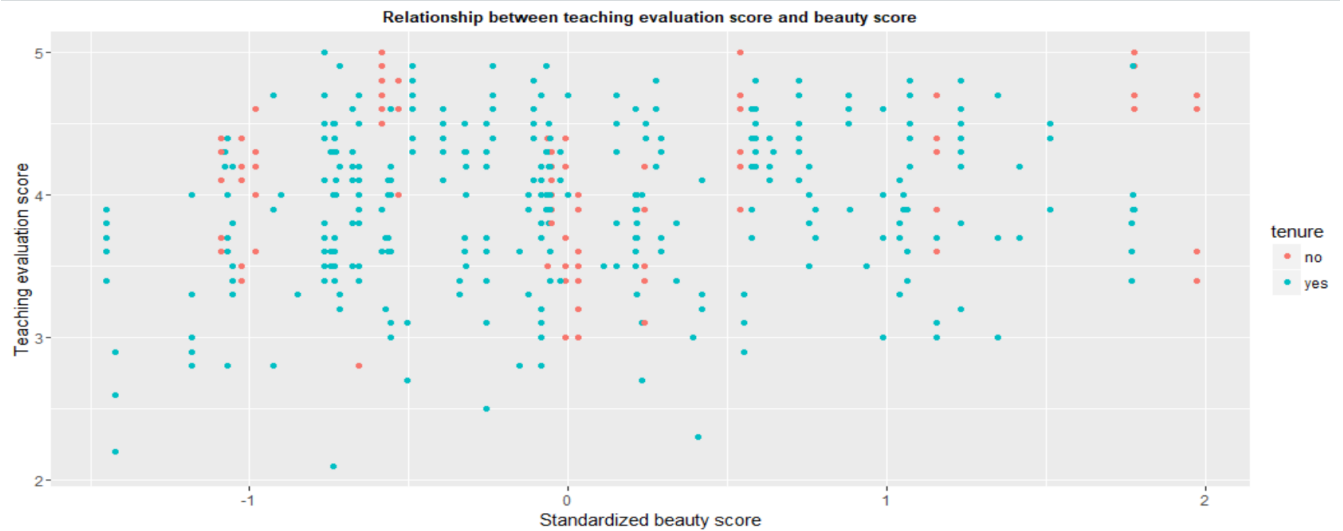
```
xyplot(eval~beauty|gender, pch=19, groups = tenure,
       main= "Relationship between teaching evaluation score and beauty score",
       ylab = "Teaching evaluation score",
       xlab = "Standardized beauty score")
```



4. Relationship between teaching evaluation and beauty score stratified by tenure using gg plots

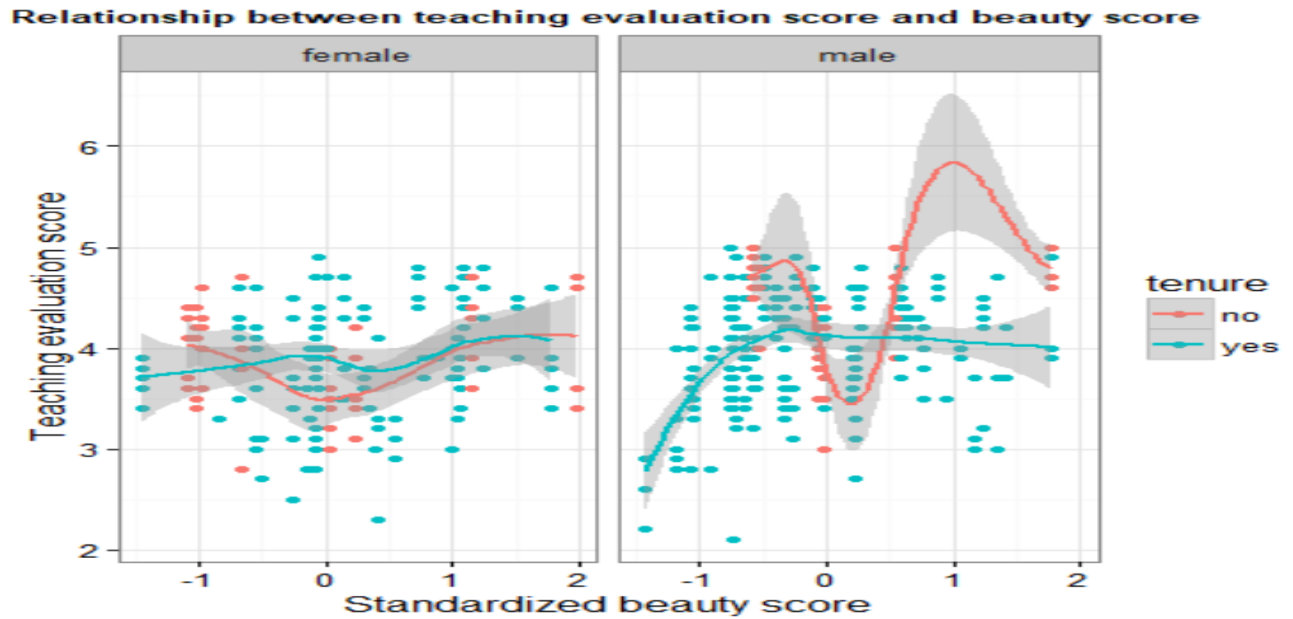
```
install.packages("ggplot2")
library(ggplot2)

attach(teachingratings)
ggplot(teachingratings,aes(y=eval, x=beauty, color=tenure)) + geom_point()+
  labs(title="Relationship between teaching evaluation score and beauty score",
       y="Teaching evaluation score", x="Standardized beauty score") +
  theme(plot.title=element_text(size = 10, face = "bold"))
```



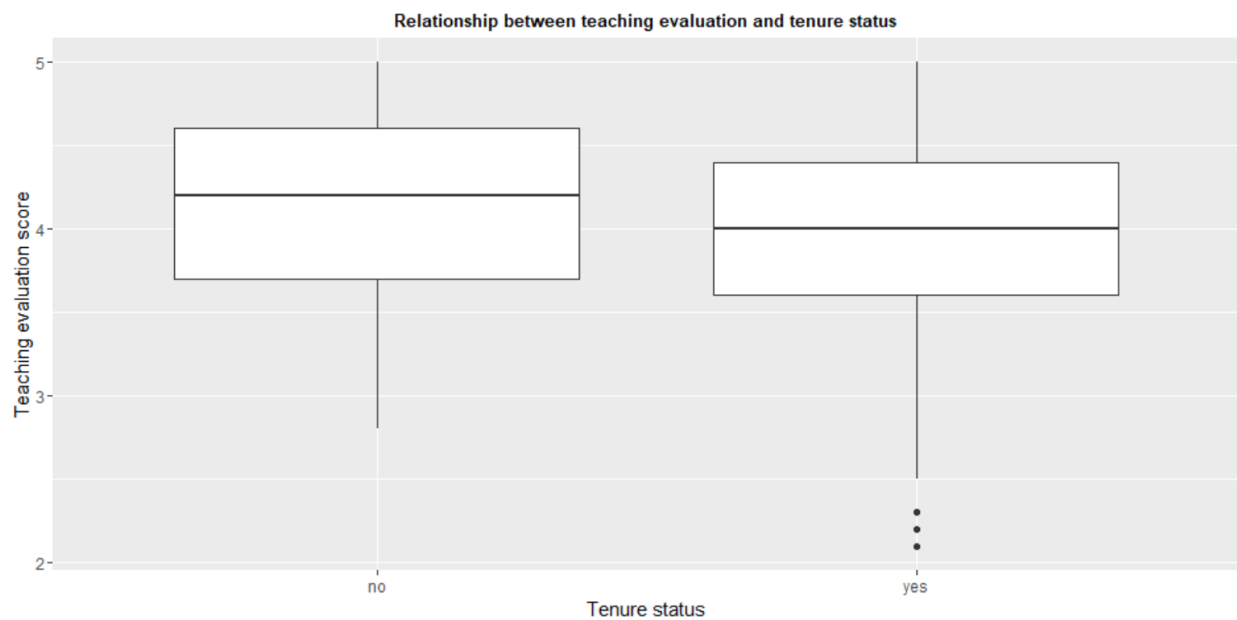
5.

```
ggplot(teachingratings,aes(y=eval, x=beauty, color=tenure)) + geom_point()+
  facet_grid(~gender)+
  labs(title="Relationship between teaching evaluation score and beauty score",
       y="Teaching evaluation score", x="Standardized beauty score") +
  geom_smooth(method="loess",size=1.0)+theme_bw()+
  theme(plot.title=element_text(size = 10, face = "bold"))
```



6. Relationship between teaching evaluation and tenure status using box plots

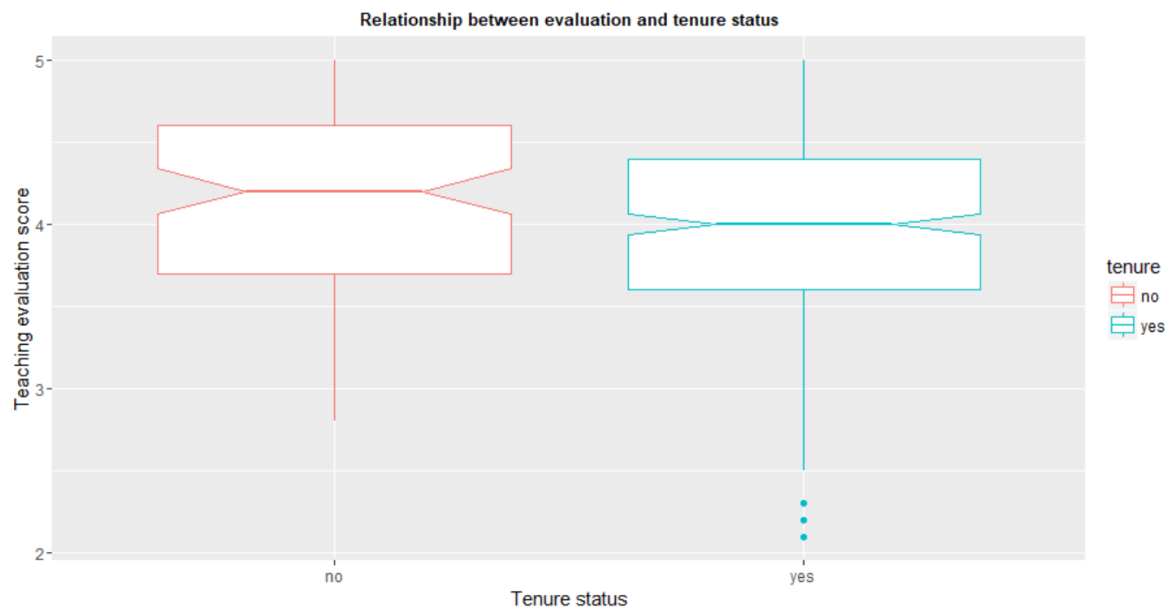
```
p<- ggplot(teachingratings, aes(x=tenure, y=eval))+
  geom_boxplot()+
  labs(title="Relationship between teaching evaluation and tenure status",
       y="Teaching evaluation score", x="Tenure status")
p+theme(plot.title=element_text(size=10, face = "bold"))
```



7. Notched box plots

```
#notched box plot
```

```
ggplot(teachingratings, aes(x=tenure, y=eval, col=tenure))+  
  geom_boxplot(notch = TRUE)+  
  labs(title="Relationship between evaluation and tenure status",  
        y="Teaching evaluation score", x="Tenure status")+  
  theme(plot.title=element_text(size=10, face="bold"))
```

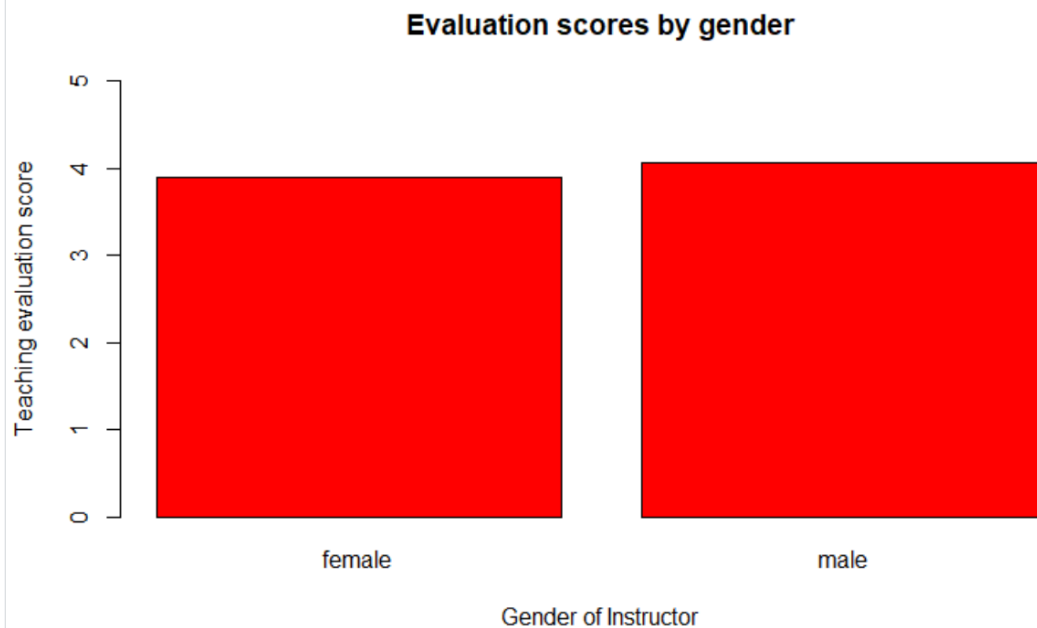


8. Plotting average teaching evaluation for males and females

```
#plotting average teaching evaluation for males and females
```

```
tab.1<-tapply(eval,gender,mean)  
tab.1
```

```
barplot(tab.1,  
  main = "Evaluation scores by gender",  
  xlab = "Gender of Instructor",  
  ylab = "Teaching evaluation score",  
  ylim = c(0,5),col = "Red")
```



9. Percentage of tenured teachers by gender

```
tab.r=prop.table(tab.2,1) #summing percentages by rows
tab.c=prop.table(tab.2,2) #summing percentages by columns

round(tab.r,2)

#OUTPUT
#           tenure
# gender      no  yes
# female 0.26 0.74
# male   0.19 0.81

plot(tab.r,
      main="The percentage of tenured teachers based on gender")
```

The percentage of tenured teachers based on gender

