

Personal Dataset Project

```
salarycleaned<- salary[1:32,1:9]
summary(salarycleaned)
```

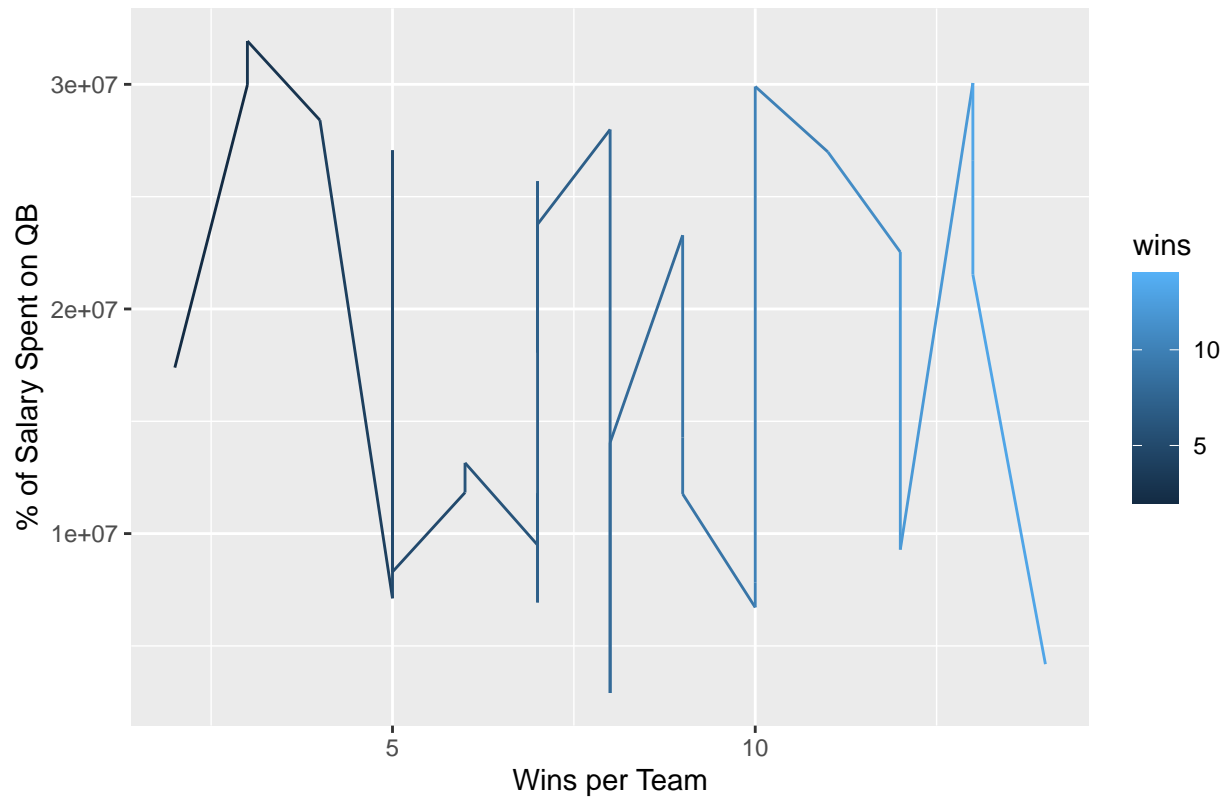
```
##   team_code      wins      losses      Offensive
## Length:32      Min.   : 2.000      Min.   : 2.000      Min.   : 43228787
## Class :character 1st Qu.: 5.750      1st Qu.: 6.000      1st Qu.: 77663754
## Mode  :character Median : 7.500      Median : 8.500      Median : 85421420
##              Mean  : 7.969      Mean  : 7.969      Mean  : 83686596
##              3rd Qu.:10.000      3rd Qu.:10.000      3rd Qu.: 92816428
##              Max.   :14.000      Max.   :14.000      Max.   :110937068
##   Defensive      Total      QB      QBPerC
## Min.   :46880280 Min.   :108236693 Min.   : 2903516 Min.   :0.01764
## 1st Qu.:66889175 1st Qu.:150803799 1st Qu.: 9440985 1st Qu.:0.06506
## Median :74837700 Median :161430778 Median :17726040 Median :0.10889
## Mean   :75055081 Mean   :158741677 Mean   :17975754 Mean   :0.11248
## 3rd Qu.:84781706 3rd Qu.:165947119 3rd Qu.:26695442 3rd Qu.:0.16592
## Max.   :94510338 Max.   :181562410 Max.   :31930059 Max.   :0.20917
##   QBClean
## Min.   :0.0176
## 1st Qu.:0.0651
## Median :0.1089
## Mean   :0.1125
## 3rd Qu.:0.1659
## Max.   :0.2092
```

```
head(salarycleaned)
```

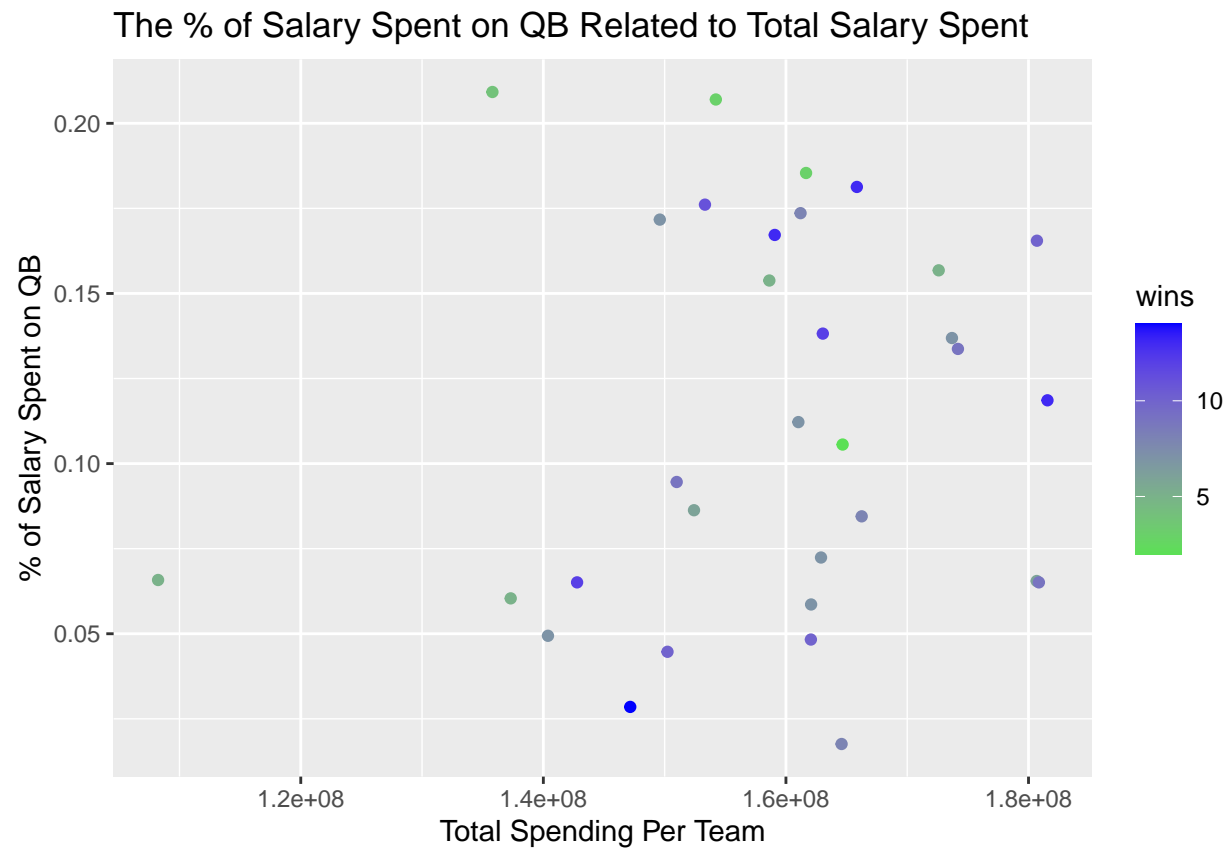
```
##   team_code wins losses Offensive Defensive      Total      QB      QBPerC
## 1   nwe2019   12     4  81412154  81629439 163041593 22535204 0.13821752
## 2   buf2019   10     6  71454855  78780203 150235058  6713826 0.04468881
## 3   nyj2019    7     9  79201562  82873341 162074903  9491711 0.05856373
## 4   mia2019    5    11  43228787  65007906 108236693  7119898 0.06578082
## 5   rav2019   14     2  52652735  94510338 147163073  4187820 0.02845700
## 6   pit2019    8     8  78526317  82676956 161203273 27991392 0.17364035
##   QBClean
## 1  0.1382
## 2  0.0447
## 3  0.0586
## 4  0.0658
## 5  0.0285
## 6  0.1736
```

```
ggplot(data=salarycleaned, aes(x=wins, y=QB, color=wins))+
  geom_line()+xlab("Wins per Team")+
  ylab("% of Salary Spent on QB")+ ggtitle("What was the % Spent on QB Related to # of Wins")
```

What was the % Spent on QB Related to # of Wins

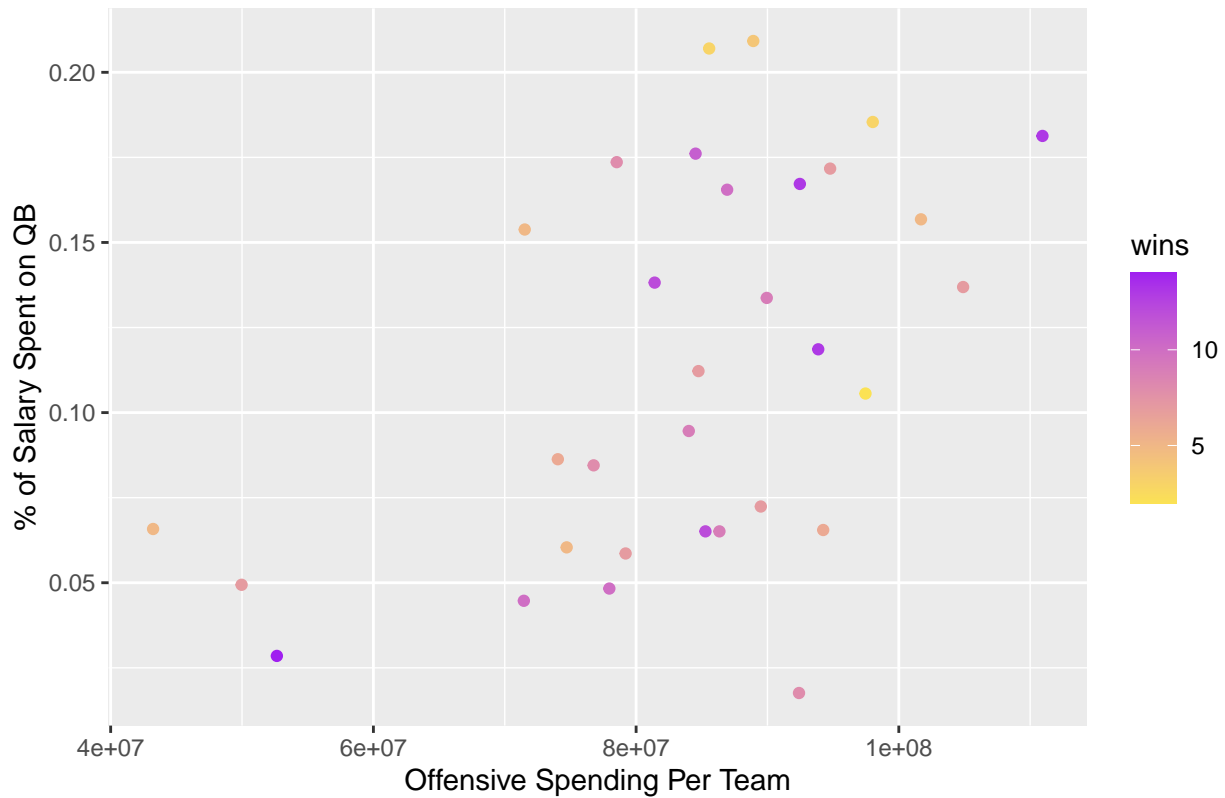


```
ggplot(salarycleaned, mapping=aes(x=Total, y=QBClean, color=wins)) + geom_point()+
  scale_color_gradient2(low = "blue", high = "blue", mid = "green")+
  xlab("Total Spending Per Team")+ ylab("% of Salary Spent on QB")+
  ggtitle("The % of Salary Spent on QB Related to Total Salary Spent")
```

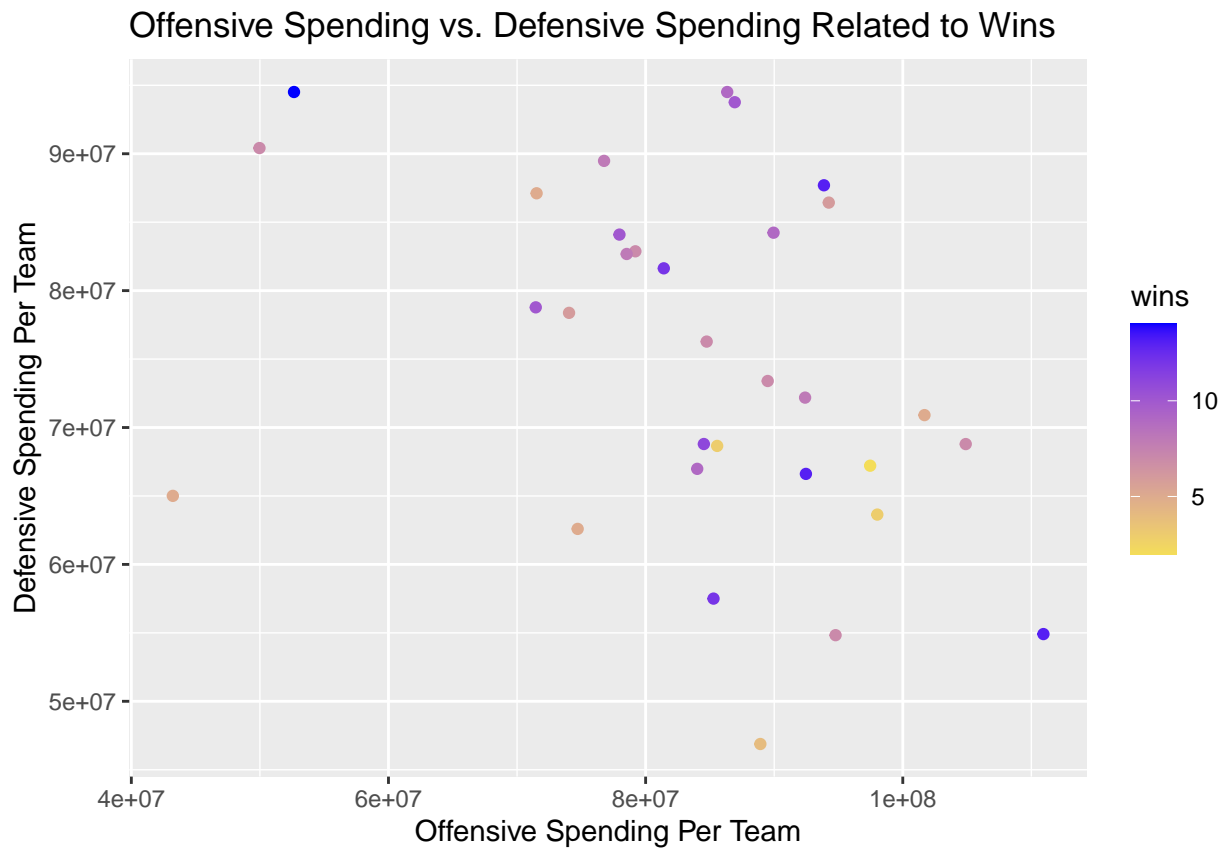


```
ggplot(salarycleaned, mapping=aes(x=Offensive, y=QBClean, color=wins)) + geom_point()+
  scale_color_gradient2(low = "blue", high = "purple", mid = "yellow")+
  xlab("Offensive Spending Per Team")+ ylab("% of Salary Spent on QB")+
  ggtitle("The % of Salary Spent on QB Related to Offensive Salaries Spent")
```

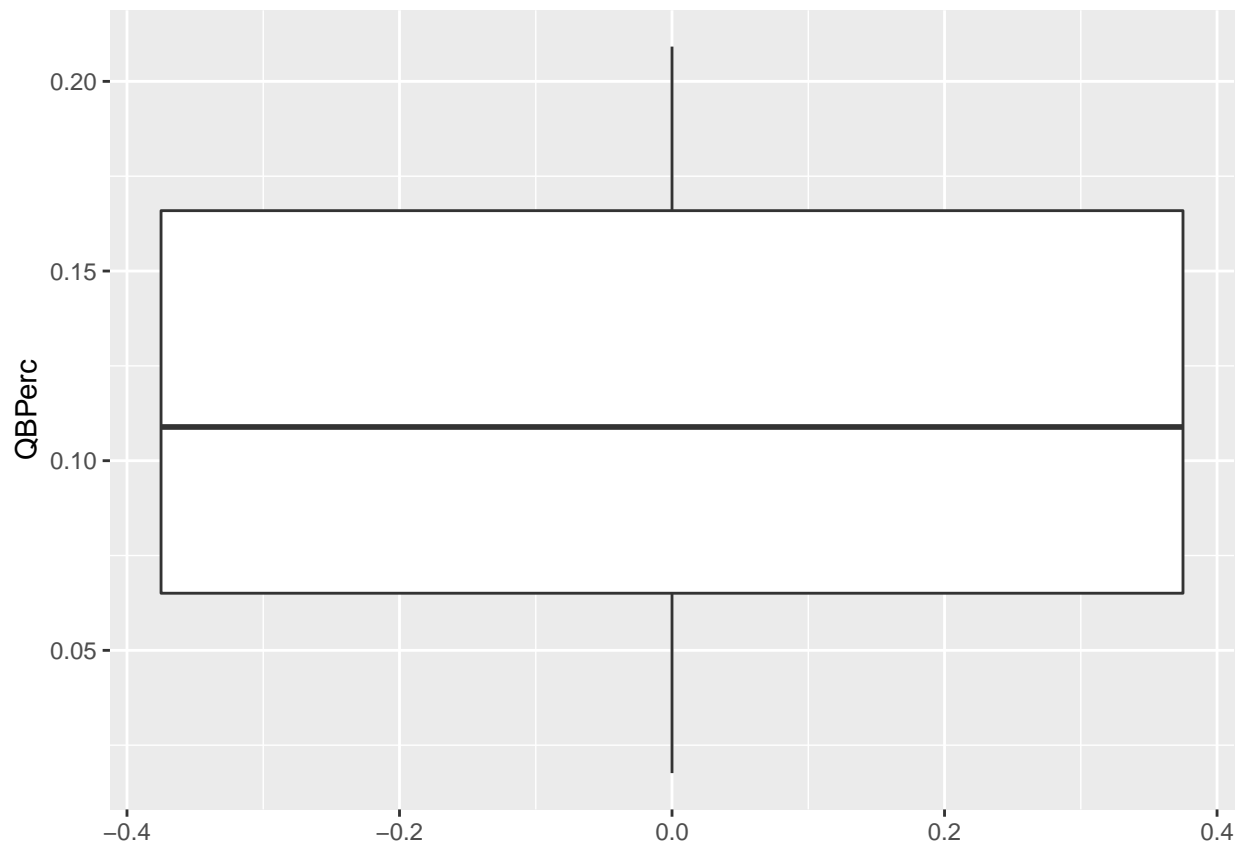
The % of Salary Spent on QB Related to Offensive Salaries Spent



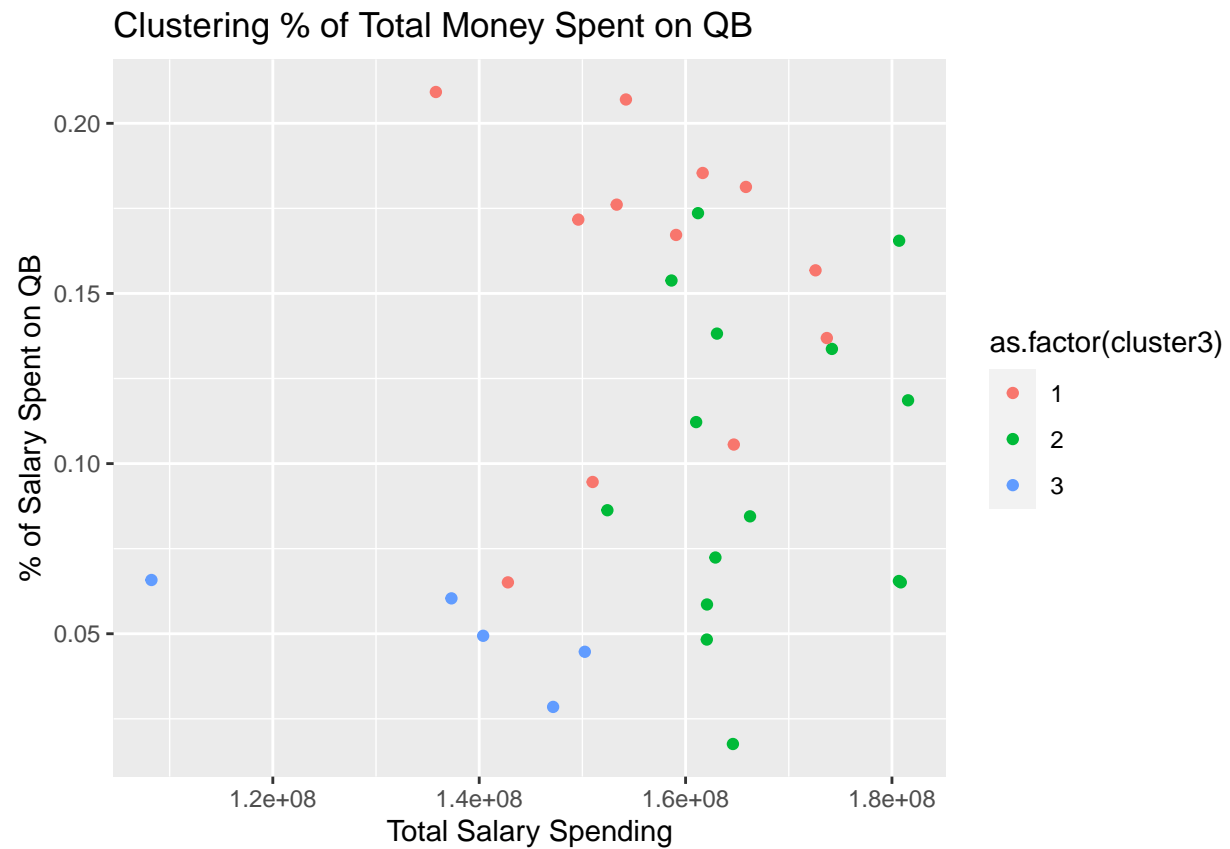
```
ggplot(salarycleaned, mapping=aes(x=Offensive, y=Defensive, color=wins)) + geom_point()+
  scale_color_gradient2(low = "gray", high = "blue", mid = "yellow")+
  xlab("Offensive Spending Per Team")+ ylab("Defensive Spending Per Team")+
  ggtitle("Offensive Spending vs. Defensive Spending Related to Wins")
```



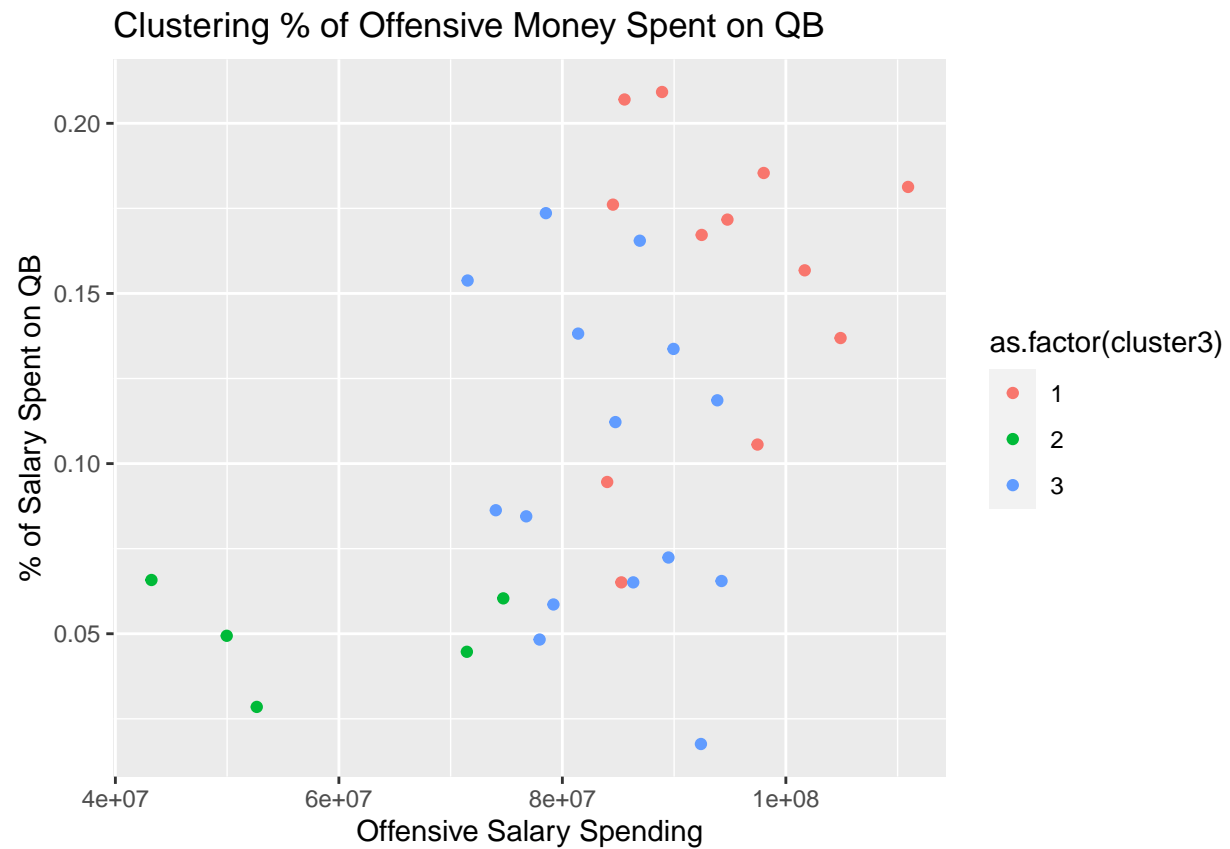
```
ggplot(data = salarycleaned, mapping = aes(y=QBPerC)) + geom_boxplot()
```



```
salaryk3 <- kmeans(salarycleaned[,2:9],3)
salarycleaned$cluster3 <-salaryk3$cluster
ggplot(salarycleaned, aes(x=Total,y=QBClean, color=as.factor(cluster3)))+geom_point()+
  xlab("Total Salary Spending")+ ylab("% of Salary Spent on QB")+ggtitle("Clustering % of Total Money Spent on QB")
```



```
salaryk3 <- kmeans(salarycleaned[,2:9],3)
salarycleaned$cluster3 <- salaryk3$cluster
ggplot(salarycleaned, aes(x=Offensive,y=QBClean, color=as.factor(cluster3)))+geom_point()+
  xlab("Offensive Salary Spending")+ ylab("% of Salary Spent on QB")+ggtitle("Clustering % of Offensive")
```



```
salaryk3 <- kmeans(salarycleaned[,2:9],3)
salarycleaned$cluster3 <-salaryk3$cluster
ggplot(salarycleaned, aes(x=Offensive,y=Defensive, color=as.factor(cluster3)))+geom_point()+
  xlab("Offensive Salary Spending")+ ylab("Defensive Salary Spending")+ggtitle("Clustering of Offensive
```


Clustering of Offensive Money Spent vs. Defensive Money Spent

