

Third Data Set

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March 7, 2016

```
library(RCurl)
```

```
## Loading required package: bitops
```

```
library(tidyr)
```

```
##
```

```
## Attaching package: 'tidyr'
```

```
## The following object is masked from 'package:RCurl':
```

```
##
```

```
##     complete
```

```
library(dplyr)
```

```
##
```

```
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
```

```
##
```

```
##     filter, lag
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
##     intersect, setdiff, setequal, union
```

```
library(useful)
```

```
## Loading required package: ggplot2
```

```
URL <- getURL("https://raw.githubusercontent.com/DanielBrooks39/IS607/master/Project%20NBA%20wins.csv")
WinData <- read.csv(text = URL, header = TRUE)
```

```
tbl_df(WinData)
```

```
## Source: local data frame [26 x 33]
```

```
##
```

```
##      Rk.U.0098.. Season      Lg  ATL  BOS  BRK  CHI  CHO  CLE  DAL
##           (int)  (fctr) (fctr) (int) (int) (int) (int) (int) (int) (int)
## 1             2 2014-15   NBA    60   40   38   50   33   53   50
## 2             3 2013-14   NBA    38   25   44   48   43   33   49
## 3             4 2012-13   NBA    44   41   49   45   21   24   41
```

```
## 4          5 2011-12    NBA    40    39    22    50     7    21    36
## 5          6 2010-11    NBA    44    56    24    62    34    19    57
## 6          7 2009-10    NBA    53    50    12    41    44    61    55
## 7          8 2008-09    NBA    47    62    34    41    35    66    50
## 8          9 2007-08    NBA    37    66    34    33    32    45    51
## 9         10 2006-07    NBA    30    24    41    49    33    50    67
## 10        11 2005-06    NBA    26    33    49    41    26    50    60
## ..          ...      ...      ...      ...      ...      ...      ...      ...
## Variables not shown: DEN (int), DET (int), GSW (int), HOU (int), IND
## (int), LAC (int), LAL (int), MEM (int), MIA (int), MIL (int), MIN (int),
## NOP (int), NYK (int), OKC (int), ORL (int), PHI (int), PHO (int), POR
## (int), SAC (int), SAS (int), TOR (int), UTA (int), WAS (int)
```

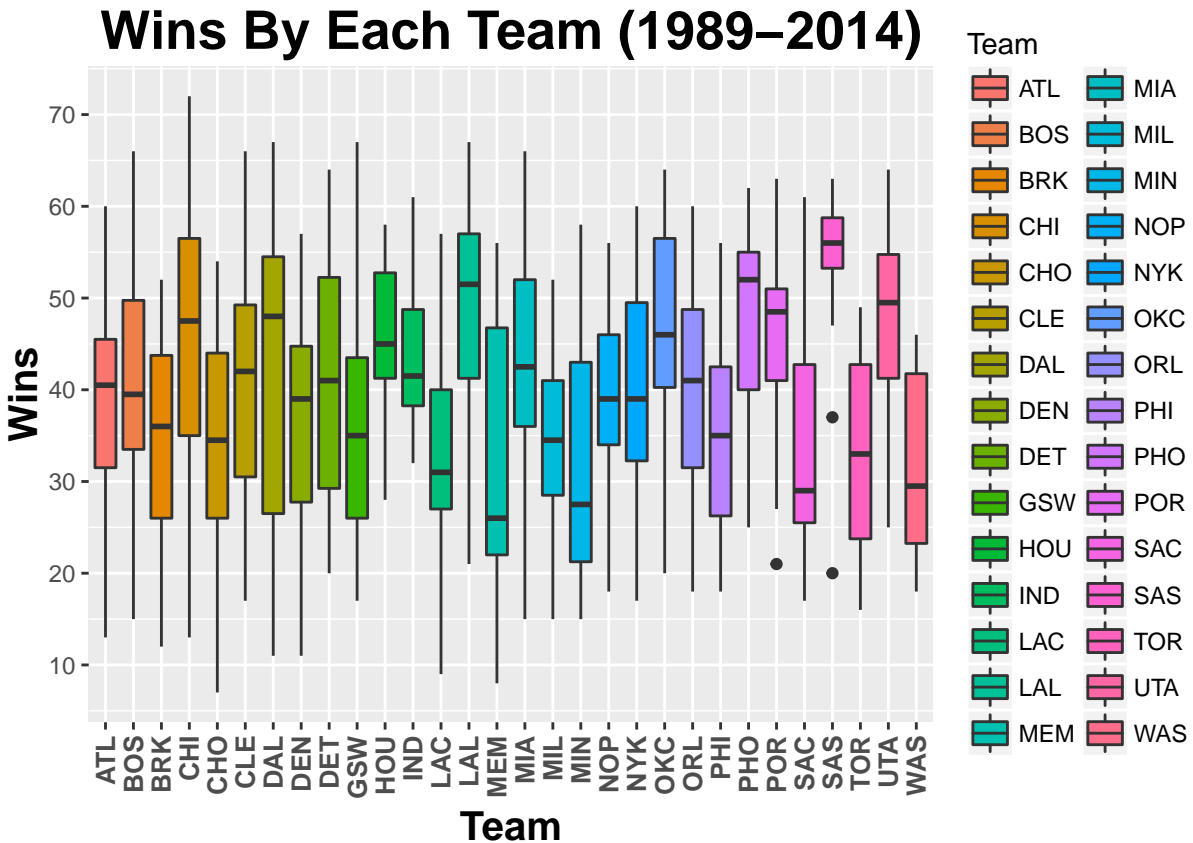
```
TidyData <- gather(WinData,"Team", "Wins",4:33)
names(TidyData) <- c("Num", "Season", "League","Team", "Wins")

TidyData <- TidyData %>% separate(Season, c("Start", "End"), sep = "-")
TidyData <- select(TidyData, Start, Team, Wins)
```

Box Plot broken apart by each team

```
ggplot(TidyData, aes(x=Team, y=Wins, fill = Team)) + geom_boxplot() + theme(axis.text.x = element_text(
```

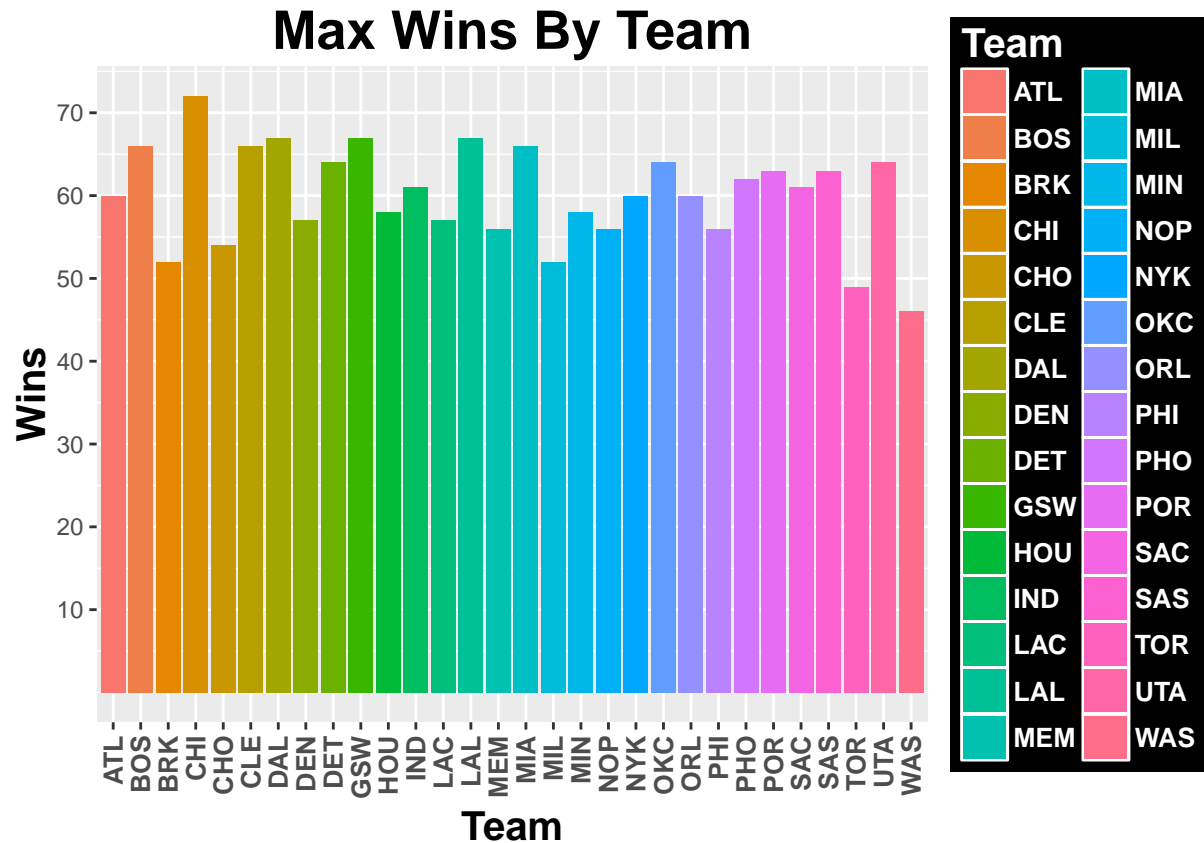
```
## Warning: Removed 27 rows containing non-finite values (stat_boxplot).
```



* This is a Box Plot that will show you the break down of each team (1989-2014). It will show you the average number of wins over the time span, the quartiles over the time span, and the most and least number of wins over the time span. We can see by the graph that SAS (the Spurs) have the most average wins over all of the other teams over the time span. They have a very close together box plot, meaning their wins do not vary from year to year. It shows that they are a pretty consistent team.

Bar Graph of most wins in a season (1989-2014) by Team

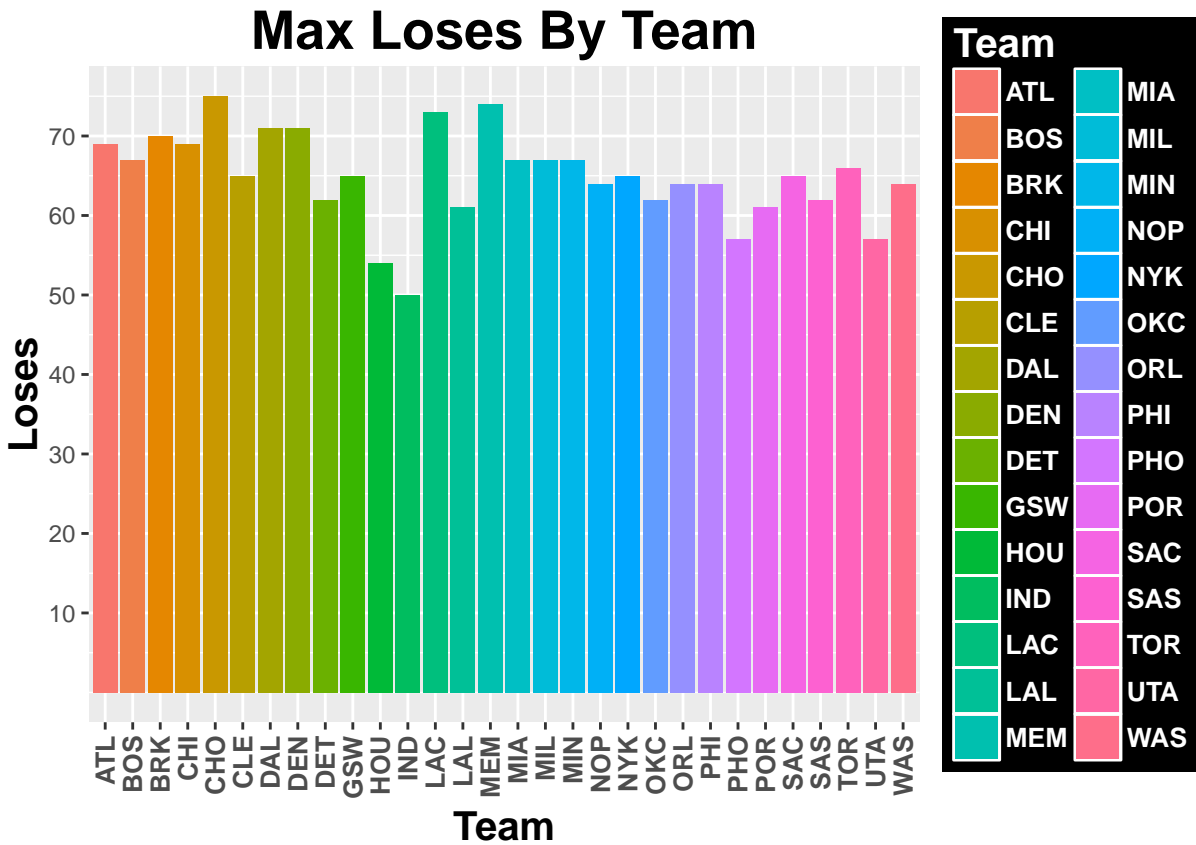
```
ggplot(TidyData, aes(x=Team, y=Wins, fill = Team)) + geom_bar(stat="identity", position="dodge") + theme
```



* This is a bar graph that show the highest number of wins a team. WE can see that the Chicago Bulls(CHI) have the most wins over the time span. The currently hold the recod for the best record in NBA history with 72, we can see that there is really no team that has come close to the number. (Golden State is on track for beating that record this basketball season

Bar Graph of most loses in a season (1989-2014) by Team

```
TidyData <- TidyData %>% mutate(Loses = 82-Wins)
ggplot(TidyData,aes(x=Team, y=Loses, fill = Team)) + geom_bar(stat="identity", position="dodge") + theme_minimal()
```



* This is a bar graph that shows the most loses by team in a given season over the time span. We can see that Charlotte(Bobcats/Hornets) has the most loses out of any team. The look to have lost around 75 games! That means the only won 7 games all season. Memphis and LA Clippers are pretty close as well.