NBA Dataset Project #1

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Abstract

Using the NBA datasets provided courtsey of Alex Bresler, we created visualizations to address a series of questions we had about the NBA, its players, fans, and more.

Contents

Initiate Needed Packages

```
suppressMessages(library(ggplot2))
```

```
## Warning: package 'ggplot2' was built under R version 3.1.2
```

```
suppressMessages(library(reshape2))
```

```
## Warning: package 'reshape2' was built under R version 3.1.2
```

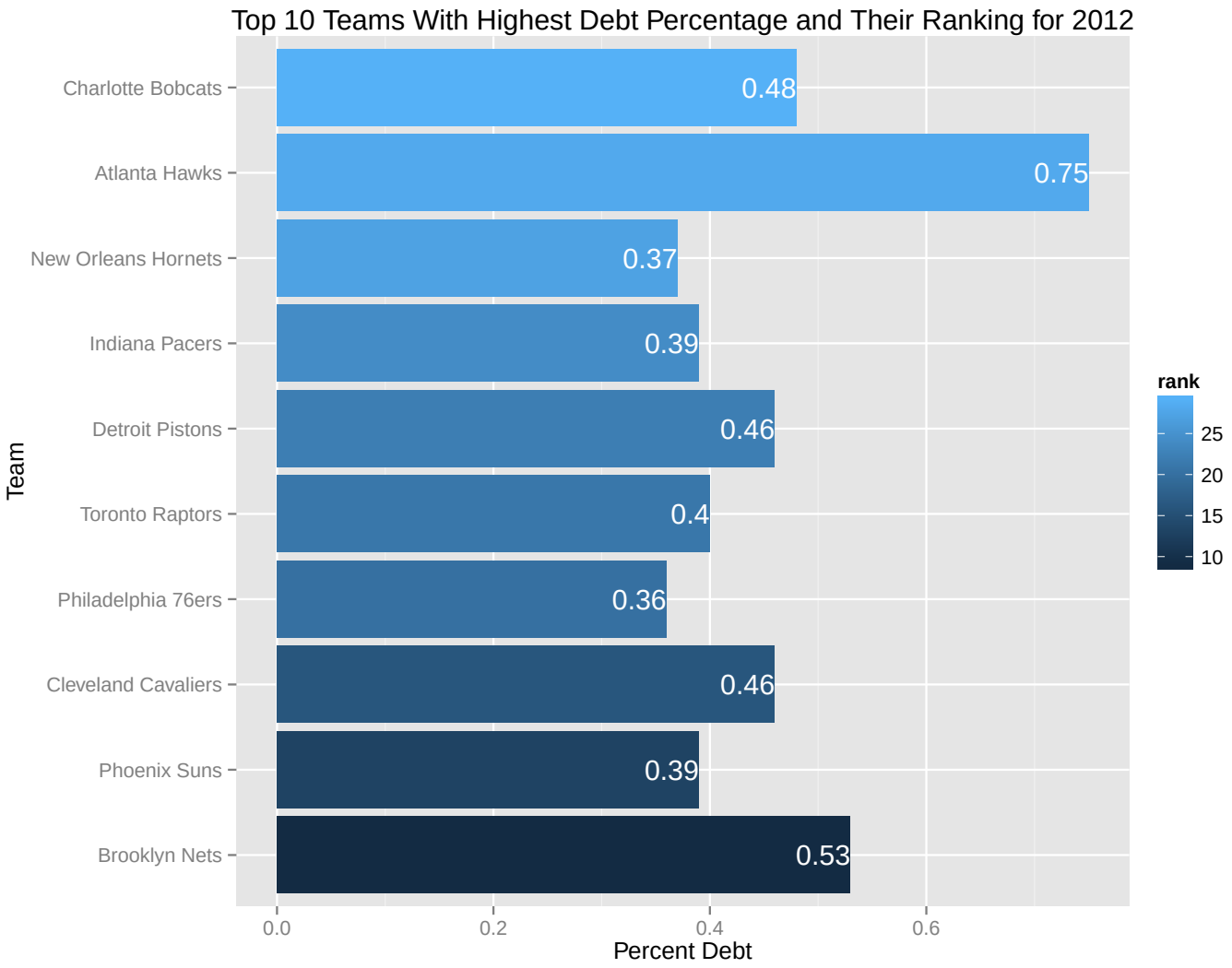
```
suppressMessages(library(dplyr))
suppressMessages(library(scales))
suppressMessages(library(gridExtra))
suppressMessages(library(grid))
suppressMessages(library(formatR))
```

```
## Warning: package 'formatR' was built under R version 3.1.2
```

Debt Percentage and Rank

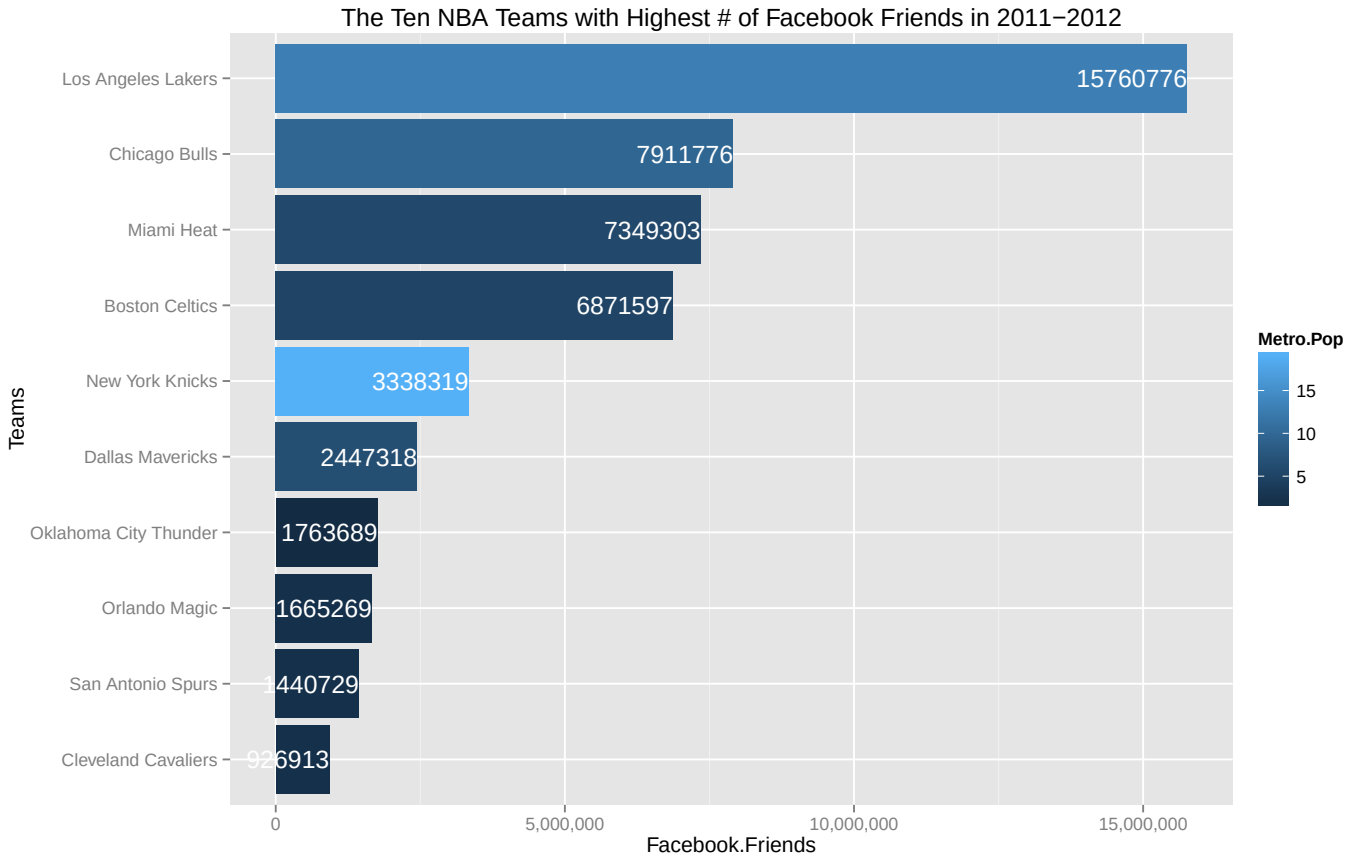
Which franchises held the highest debt percentage in 2012 and in light of their debt, how did these franchises rank in comparison? grn

```
nbafran=read.csv("nba_franchise_values_1991_2012.csv")


debt_rank2012= nbafran %>%
      select(team, year, debt_percent, rank) %>%
      filter(year== "2012") %>%
      arrange(desc(debt_percent)) %>%
      head(10)
```



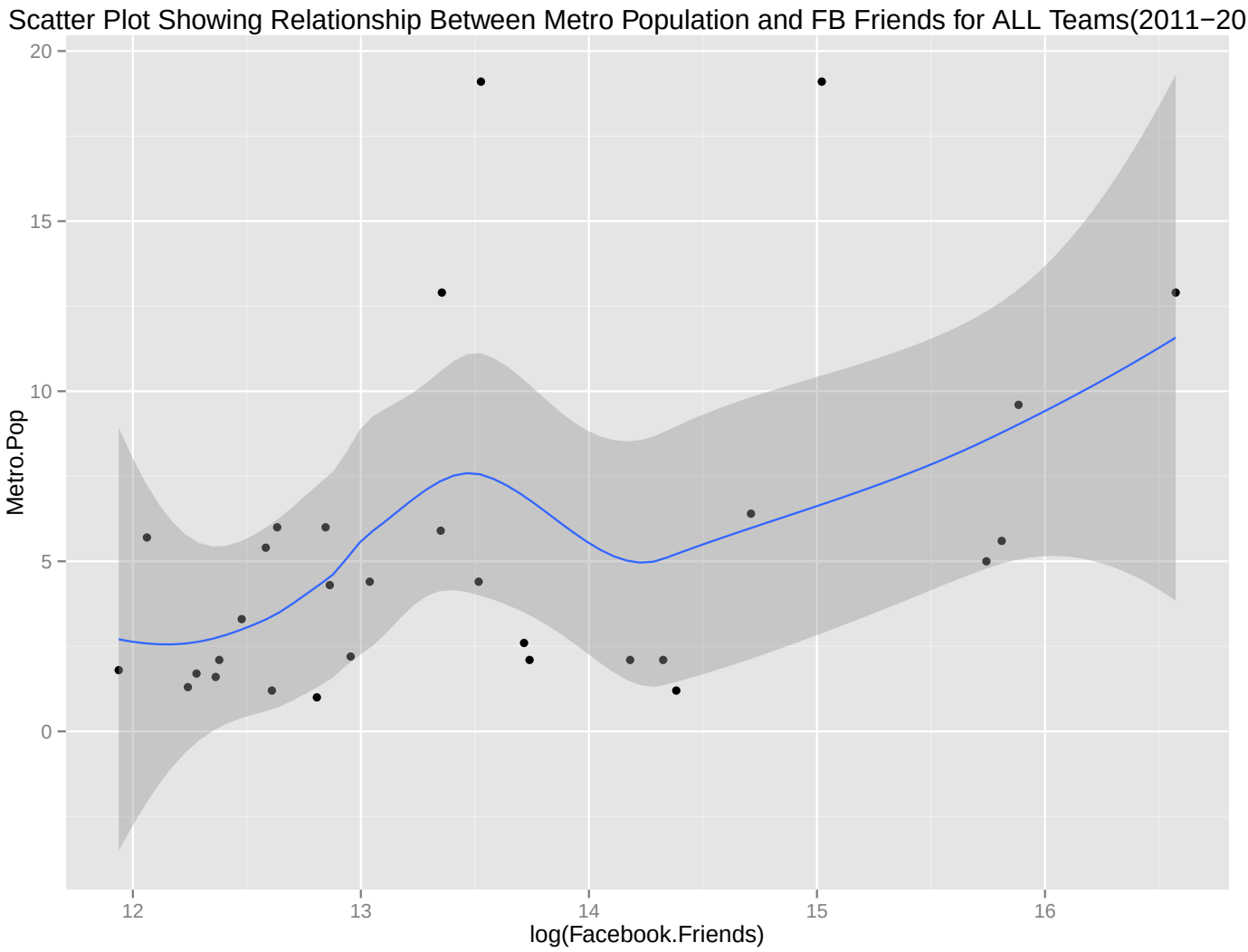
Facebook Friends and Metro Population

How many Facebook friends did each NBA team have at the close of the 2011-2012 season, and were these numbers at all effected by the metro population of the area?



Scatter Plot

```
## geom_smooth: method="auto" and size of largest group is <1000, so using loess. Use 'method = x' to change
```



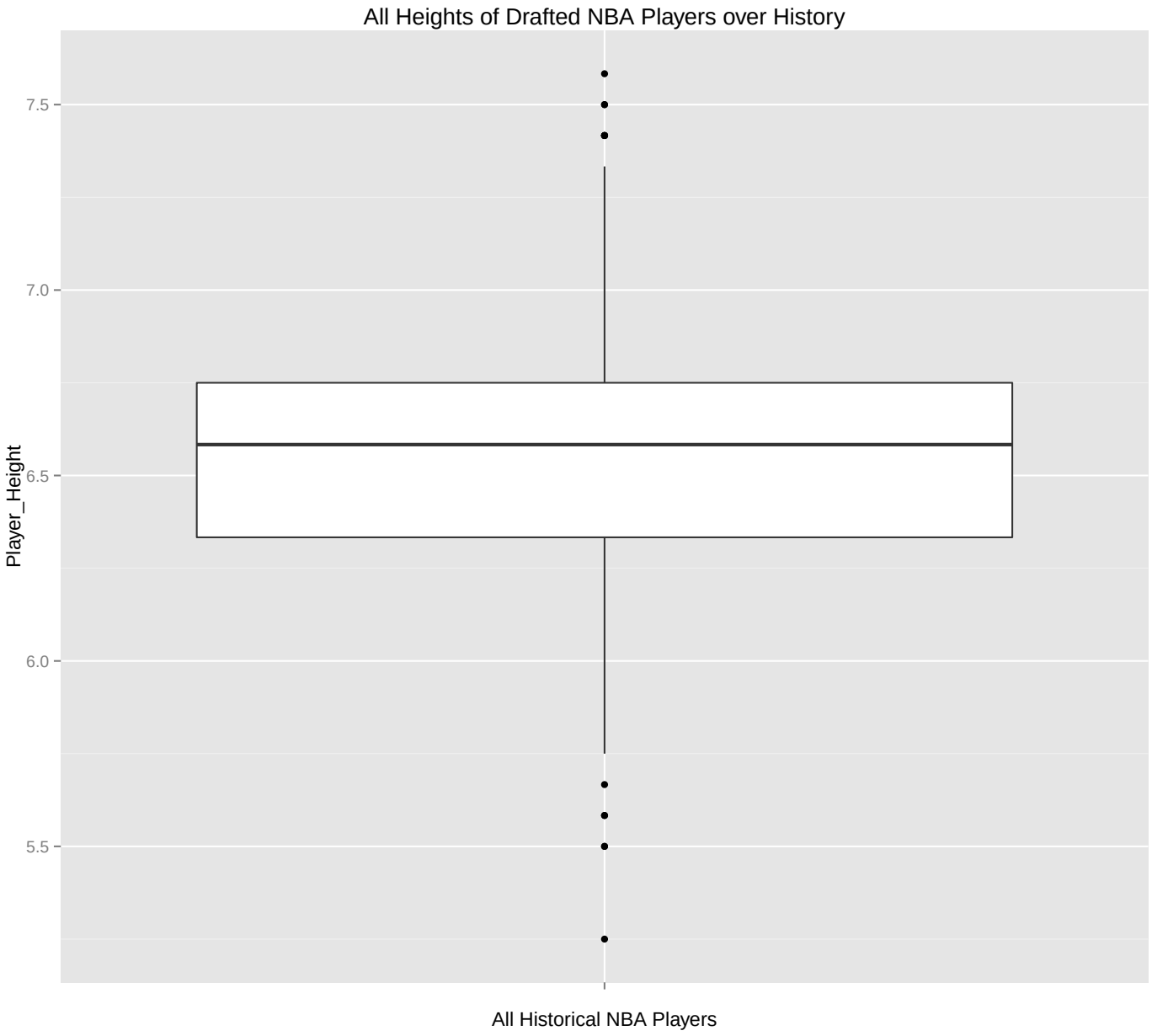
Historical Player Heights

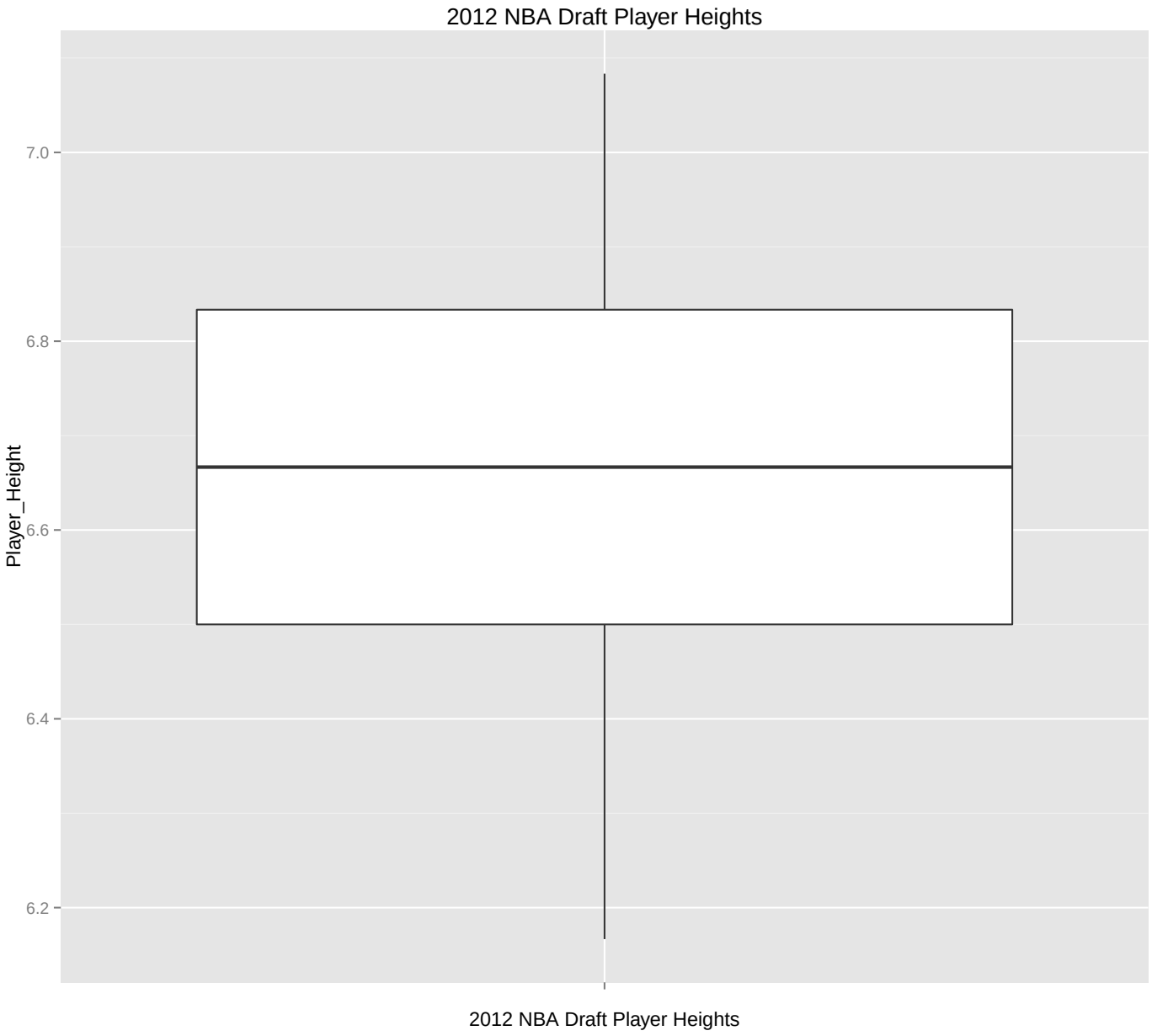
Boxplot of all drafted player heights

What is the range of NBA player heights for all time compared to players drafted in 2012? Is the mean higher?

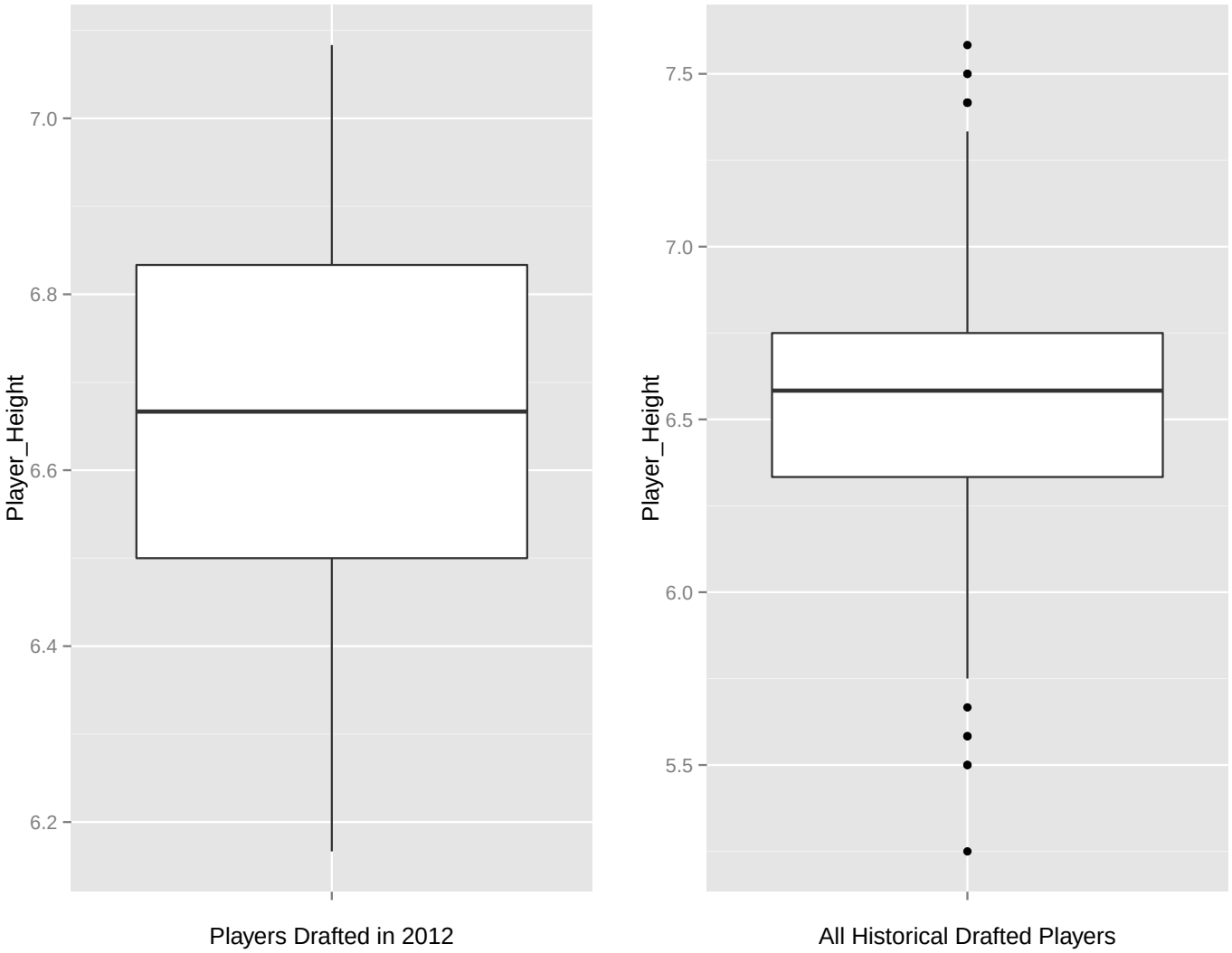
```
nbadrafthistorycsv=read.csv("NBA Draft History.csv")
nbadraft2012=read.csv("2012 NBA Draft.csv")

nbadrafthistory=nbadrafthistorycsv %>%
  select(Franchise, Height_Inches,Player_Height) %>%
  arrange(Height_Inches)


testheight=nbadrafthistory %>%
  group_by(Franchise) %>%
  summarise(avg_height_inches = mean(Height_Inches, na.rm=TRUE)) %>%
  mutate(AverageHeightVariance=avg_height_inches - 78.597) %>%
  arrange(desc(AverageHeightVariance)) %>%
  head(50)
```

```
## Warning: Removed 3530 rows containing non-finite values (stat_boxplot).
```


All Heights of Drafted NBA Players over History
Player_Height
7.5
7.0
6.5
6.0
5.5
All Historical NBA Players


2012 NBA Draft Player Heights
Player_Height
7.0
6.8
6.6
6.4
6.2
2012 NBA Draft Player Heights

```
## Warning: Removed 3530 rows containing non-finite values (stat_boxplot).
```

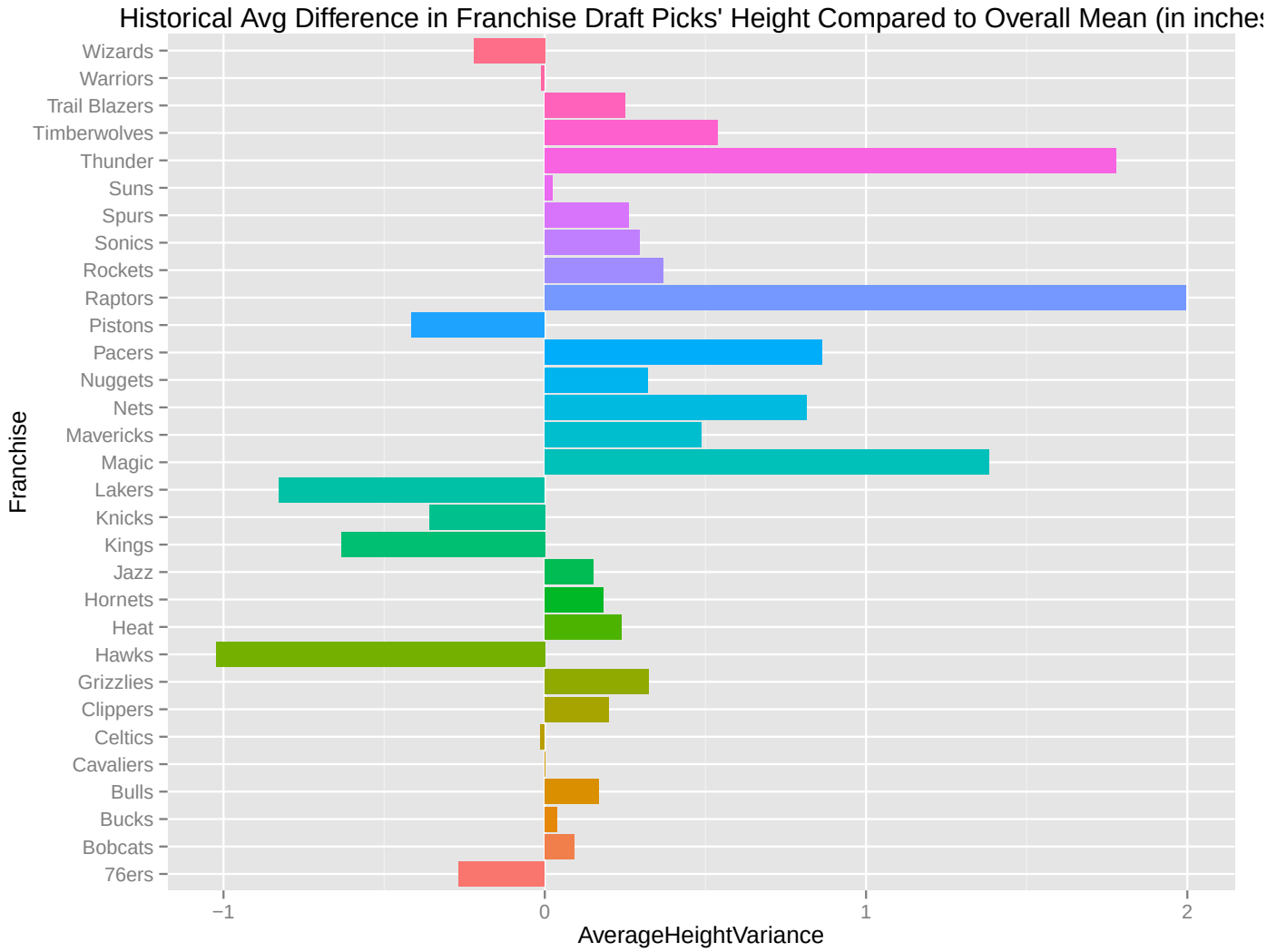


Historical Variance in Each Team's Drafted Player Heights from the historical mean

Which teams are drafting taller than average players and which teams are drafting shorter than average players?

```
nbadrafthistory=nbadrafthistorycsv %>%
  select(Franchise, Height_Inches,Player_Height) %>%
  arrange(Height_Inches)


testheight=nbadrafthistory %>%
  group_by(Franchise) %>%
  summarise(avg_height_inches = mean(Height_Inches, na.rm=TRUE)) %>%
  mutate(AverageHeightVariance=avg_height_inches - 78.597) %>%
  arrange(desc(AverageHeightVariance)) %>%
  head(50)
```

```
## Warning: Stacking not well defined when ymin != 0
```



Ticket Revenue for Arenas at Full Capacity

How much revenue is each team's stadium capable of producing for a sell-out game? Did the teams with the more expensive average ticket prices make it to the playoffs?

```
forbsdf$fullCapTixRev= (forbsdf$Capacity * forbsdf$Avg.Tix.Price)
```