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What dataset are you working with: nba\_draft\_2015

List 3 questions that you can ask with your dataset.

Q1: In the 2015 NBA draft, are point guards more likely to become superstars than forwards (comparing basketball positions)?

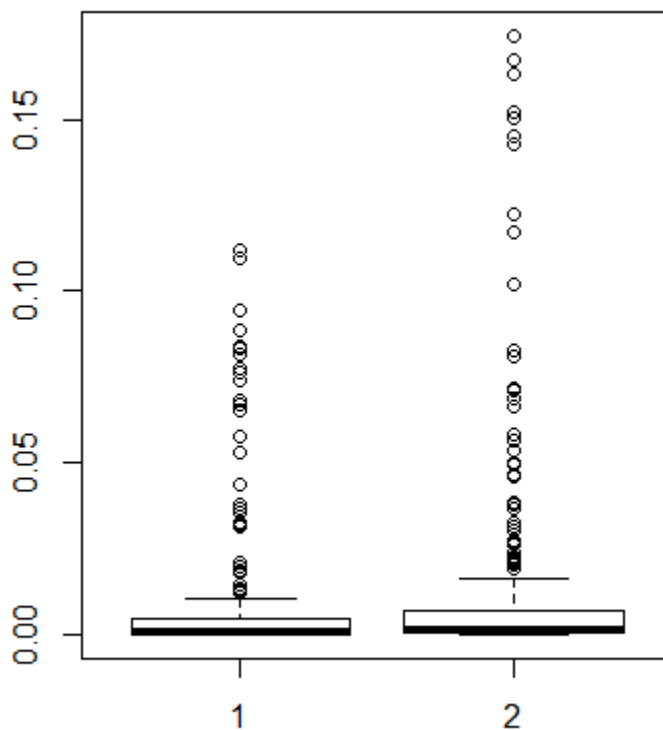
List the associated null hypothesis for each question:

Q1: Point guards and forwards in the draft are equally likely to become superstars

What statistical test(s) will you use to answer each of the questions:

Q1: Welch's t-test (variances are unequal)

Make a visual plot showing the relationship that you will analyze statistically (e.g. boxplot for t-test or ANOVA; scatterplot for regression; table for chi-square).



Do your data meet the assumptions required for the statistical test you want to run?  
Please state the assumptions you examined and whether or not your data meet those assumptions:

Q1:  $n > 30$

Variances are unequal, var.test p-value =  $7.441e-10$ .

Run the statistical test! Put your results here:

Q1:  $t = -1.8703$ ,  $df = 378.15$ , p-value =  $0.06221$

Interpret your results!

Q1: At a 95% confidence level. the null hypothesis cannot be rejected.

\*However, at a 90% confidence level, the null hypothesis can be rejected. Rejecting the null hypothesis would indicate that points guards in the 2015 NBA draft would be more likely to become superstars than forwards.

Code:

```
install.packages('fivethirtyeight')
library(fivethirtyeight)

head(endorsements)
data("endorsements")

head(nba_draft_2015)
data("nba_draft_2015")

forwards = subset(nba_draft_2015, position=="SF")
pointguards = subset(nba_draft_2015, position=="PG")

var.test(forwards$superstar, pointguards$superstar)
boxplot(forwards$superstar, pointguards$superstar)
t.test(forwards$superstar, pointguards$superstar)
```