UE20CS312 - Data Analyrics - Worksheet 1a - Part 1 - Exploring data with R

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```
### Solutions

### Problem 1
df <- read.csv("top_1000_instagrammers.csv", header=TRUE)

library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --
## v ggplot2 3.3.6     v purrr   0.3.4
## v tibble  3.1.8     v dplyr   1.0.9
## v tidyr   1.2.0     v stringr 1.4.1
## v readr   2.1.2     v forcats 0.5.2
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
df$Followers <- substr(df$Followers, 1, nchar(df$Followers) - 1)
df$Authentic.Engagement <- substr(df$Authentic.Engagement, 1, nchar(df$Authentic.Engagement) - 1)
df$Engagement.Avg. <- substr(df$Engagement.Avg., 1, nchar(df$Engagement.Avg.) - 1)

df$Followers <- as.numeric(as.character(df$Followers))
df$Authentic.Engagement <- as.numeric(as.character(df$Authentic.Engagement))
df$Engagement.Avg. <- as.numeric(as.character(df$Engagement.Avg.))

print(summary(df))
```

```
##      Name                Rank          Category           Followers
##  Length:1000        Min.   :   1.0   Length:1000        Min.   :  1.60
##  Class :character   1st Qu.: 250.8   Class :character   1st Qu.:  8.60
##  Mode  :character   Median : 500.5   Mode  :character   Median : 14.10
##                     Mean   : 500.5                      Mean   : 26.04
##                     3rd Qu.: 750.2                      3rd Qu.: 25.43
##                     Max.   :1000.0                      Max.   :528.40
##
##  Audience.Country   Authentic.Engagement Engagement.Avg.
##  Length:1000        Min.   :  1.0        Min.   :  1.0
##  Class :character   1st Qu.:126.6        1st Qu.:128.1
```

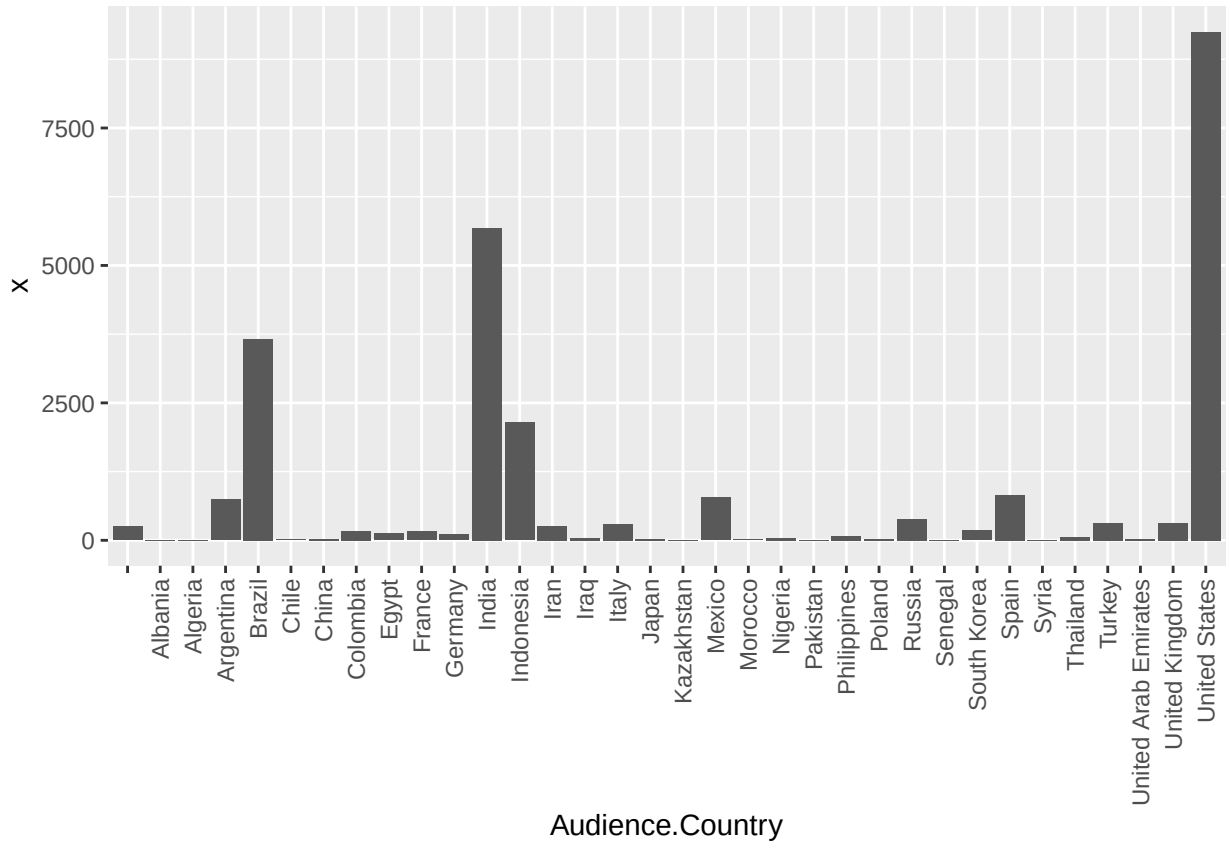
```
##  Mode  :character   Median :247.8        Median :283.1
##                     Mean   :308.3        Mean   :335.5
##                     3rd Qu.:453.2        3rd Qu.:529.2
##                     Max.   :990.9        Max.   :998.2
##                     NA's   :20
```

```
##ANALYSIS: from the summary we can tell that the average engagement
#and authentic engagement have almost similar statistics as expected.
#There's a mean of 26M followers with maximum being approx. 530M
#My instagram has 871 followers and has authentic engagement of about 450
#which are both very small when compared with the top 1000's statistics.

### Problem 2
library(ggplot2)

total <- aggregate(df$Followers, by=df[c('Audience.Country')], FUN=sum)

ggplot(total, aes(x=Audience.Country,y=x))+ geom_bar(stat='identity') + theme(axis.text.x = element_tex
```

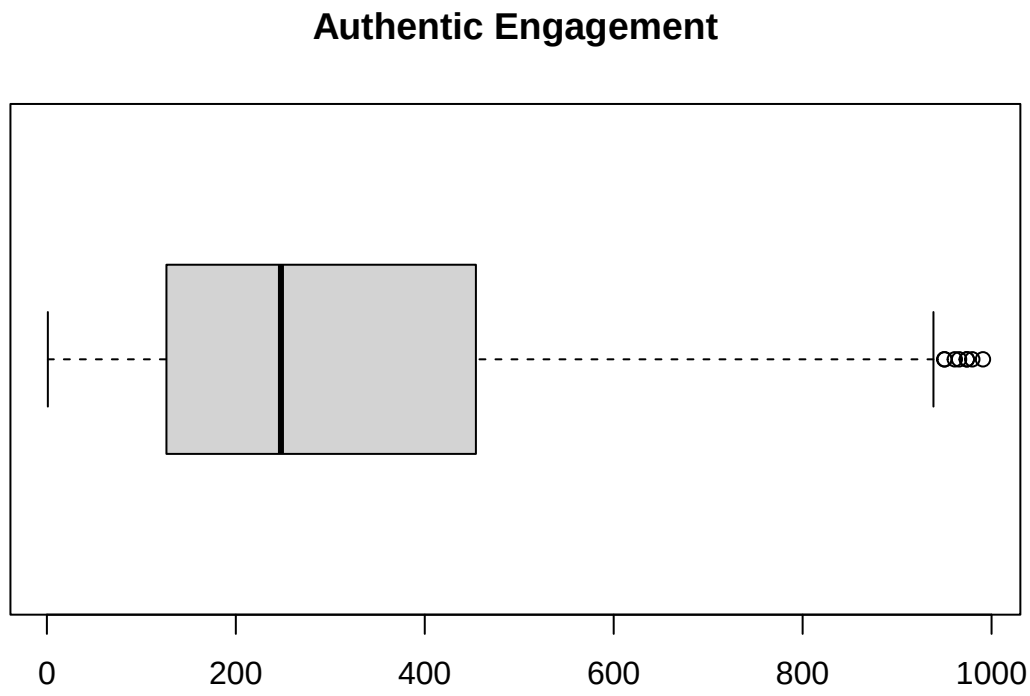



```
ind_follower <- total[which(total$Audience.Country == "India"),'x']
sprintf("Total number of followers for India -is %s", ind_follower)
```

```
## [1] "Total number of followers for India -is 5684.3"
```

```
#ANALYSIS: United states has the most amount of followers as you can see from the plotted histogram.
#India has a total of 5684M followers and is ranked second.


### Problem3
library(tidyverse)
boxplot(df$Authentic.Engagement, main="Authentic Engagement", horizontal=TRUE)
```




```
#ANALYSIS: from the box plot, we can tell that minimum engagment is 1,
#median of about 250M, maximum of 1000M and 1st quartile at 125M while the third quartile is at 450M.
#It also has some potential outliers after 950M.

### Conclusion
#My instagram comes under lifestyle category
# It has 871 followers and an estimated engagement of 450
#On comparing it to the top 1000 instagram accounts, mine's insignificant.
#If I were to become an influencer, the best way to increase followers and engaments would be
#to switch to  amore popular category and focus on the US and indian audience
```