Using R studio

1. Which brewery produces the strongest beers by ABV%?
   To get the strongest beer, the ABV% was selected based on the top 5

```
top_abv<-sqldf("SELECT brewery_name, AVG(beer_abv) FROM beer_reviews GR
OUP BY brewery_name ORDER BY AVG (beer_abv) DESC")
```

```
print(head(top_abv,5))
```

```
                                        brewery_name AVG(beer_abv)
1                                       SchorschbrÃ¤u      19.22882
2                                  Hurlimann Brewery      13.75000
3                            Alt-Oberurseler Brauhaus      13.20000
4                                  Monks Porter House      12.46667
5 Brasserie Grain d' Orge (Brasserie Jeanne d'Arc SA)      12.44586
```

SCHORSCHBRAU is the brewery that produces the strongest beer.

2. If you had to pick 3 beers to recommend using only this data, which would you pick?

```
beer_rating1 <- group_by(beer_reviews, beer_name)
m1<- summarise(beer_rating1, rating_mean= mean(review_overall))
beer_by_rating <- arrange(m1, -rating_mean)
```

```
head(beer_by_rating, 3)
```

```
  beer_name                      rating_mean
  <chr>                                <dbl>
1 10th Anniversary Strong Belgian          5
2 2005 Grand Cru                           5
3 508 Montezuma Imperial Stout             5
```

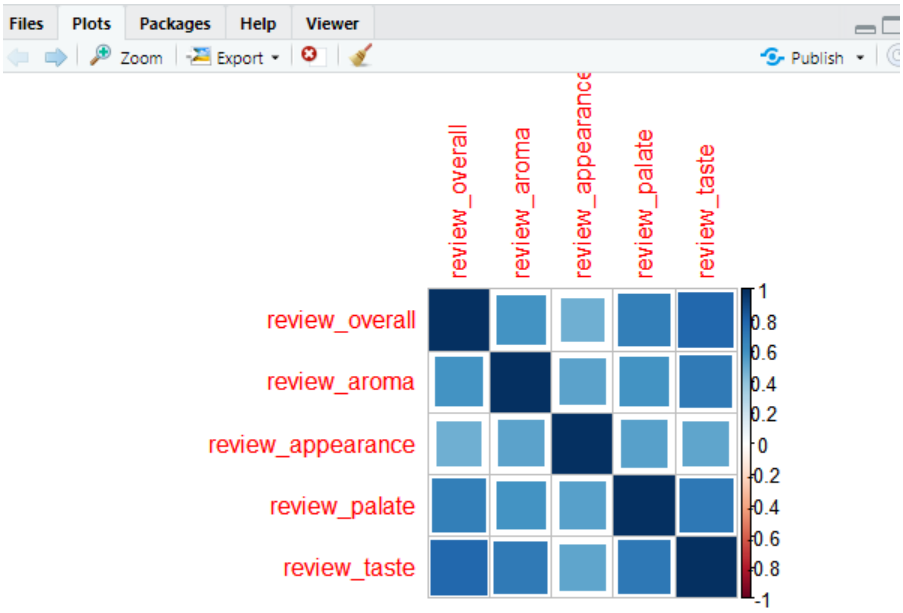
The 3 beers was chosen based on the overall reviews.

3. Which of the factors (aroma, taste, appearance, palette) are most important in

determining the overall quality of a beer?

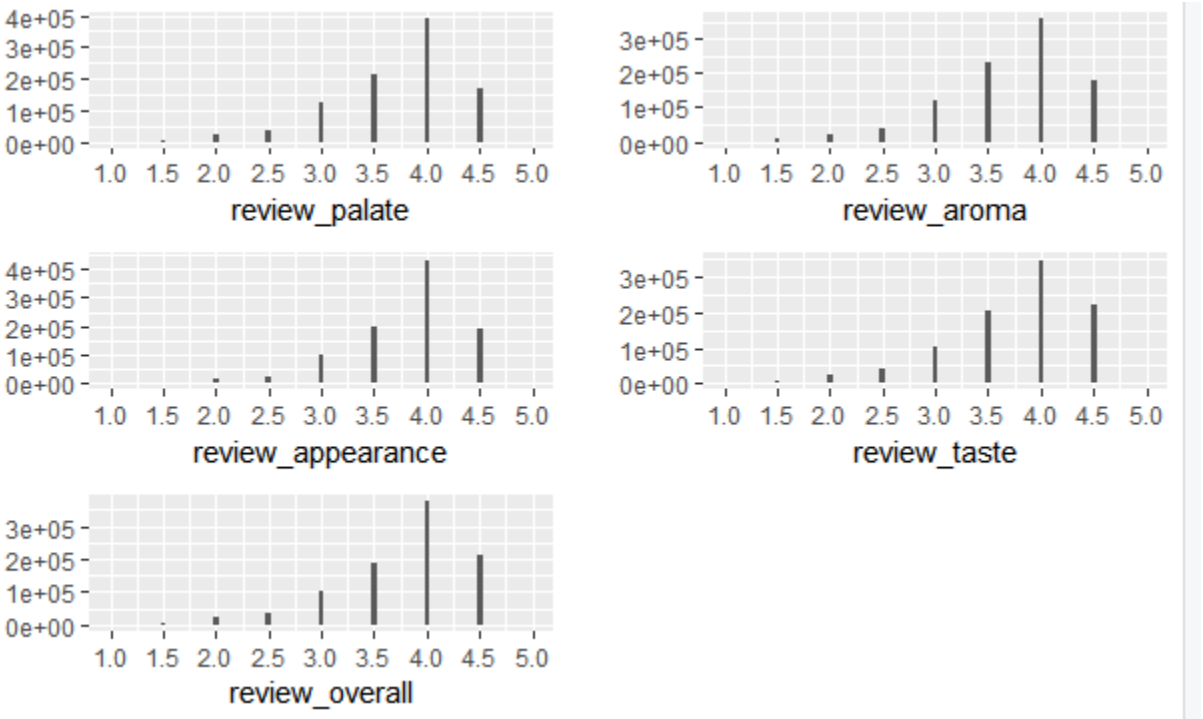
```
corelations<- cor(beer_reviews [, c(4,5,6,9,10)])
view(corelations)
library(corrplot)
corrplot(corelations, method = "square")
```

According to the correlation coefficient calculation for the variables (aroma, taste, appearance, palette) using the overall ratings, TASTE is the most important.



4. Lastly, if I typically enjoy a beer due to its aroma and appearance, which beer style should I try?

Using graph;




```
m5=qplot(x=review_overall,data = beer_reviews, binwidth=0.05)+scale_x_continu
ous(limits = c(1,5),breaks = seq(1,5,0.5))
> m2=qplot(x=review_aroma,data = beer_reviews, binwidth=0.05)+scale_x_continu
ous(limits = c(1,5),breaks = seq(1,5,0.5))
```

```
> m3=qplot(x=review_appearance,data = beer_reviews, binwidth=0.05)+scale_x_co
ntinuous(limits = c(1,5),breaks = seq(1,5,0.5))
> m4=qplot(x=review_taste,data = beer_reviews, binwidth=0.05)+scale_x_continu
ous(limits = c(1,5),breaks = seq(1,5,0.5))
> m1=qplot(x=review_palate,data = beer_reviews, binwidth=0.05)+scale_x_contin
uous(limits = c(1,5),breaks = seq(1,5,0.5))
> grid.arrange(m1,m2,m3,m4,m5,ncol=2)
```

Based on Aroma and Appearance reviews, the AMERICAN DOUBLE/ IMPERIAL STOUT should be tried because more than half of the users rated (4 and 4.5) this style according to the quality of the beers.