BA 64060-FML Assignment 1

2023-09-09

I have downloaded the data set from Kaggle and below is the URL for source data

URL for the dataset

https://www.kaggle.com/datasets/nelgiriyewithana/top-spotify-songs-2023

With reference of source data I have Modified the data which is required for now

```
spotify <- read.csv("spotify-2023_1.csv", nrows = 50, header=TRUE, sep = ",")

spotify <- na.omit(spotify)

head(spotify)
```

```
##        artists_name released_year released_month released_day spty_plists
## 1       Myke Towers          2023              3           23        1474
## 2    Olivia Rodrigo          2022              6           30        1397
## 3      Taylor Swift          2019              8           23        7858
## 4         Bad Bunny          2018              5           18        3133
## 5 Dave, Central Cee          2015              6            1        2186
## 6    Eslabon Armado          2000              3           16        3090
##   apple_plist deezer_plist bpm  mode
## 1          48           58  92 Major
## 2          94           91 138 Major
## 3         116          125 170 Major
## 4          84           87 144 Minor
## 5          67           88 141 Major
## 6          34           43 148 Minor
```

Descriptive statistics for quantitative variables

```
quantative_vars <- spotify[, c("released_day", "bpm")]

summary(quantative_vars)
```

```
##   released_day        bpm
##  Min.   : 1.00   Min.   : 67.0
##  1st Qu.: 8.25   1st Qu.:100.0
##  Median :18.50   Median :125.5
##  Mean   :16.84   Mean   :125.9
##  3rd Qu.:24.00   3rd Qu.:143.2
##  Max.   :31.00   Max.   :204.0
```

Descriptive statistics for categorical variables

```
Categorical_var <- spotify[, c("released_year", "released_month")]

table(Categorical_var)
```

```
##               released_month
## released_year 1 2 3 4 5 6 7 8 9 10 11 12
##          1999 0 0 0 0 0 0 1 0 0  0  0  0
##          2000 0 0 1 0 0 0 0 0 0  0  0  0
##          2005 0 0 0 1 1 0 0 0 0  0  0  0
##          2007 0 0 1 0 0 0 0 0 0  0  0  0
##          2013 1 0 0 0 0 0 0 0 0  0  0  0
##          2014 2 0 0 0 0 0 0 0 0  0  0  0
##          2015 0 0 0 0 0 1 0 0 0  0  0  0
##          2016 0 0 0 0 0 0 0 0 1  0  1  0
##          2017 0 0 0 0 0 0 1 0 0  0  0  0
##          2018 0 0 0 0 1 0 0 0 0  1  0  0
##          2019 0 0 0 0 0 0 0 1 0  0  0  0
##          2020 0 0 0 0 0 0 0 0 0  0  1  0
##          2022 0 0 2 0 1 1 0 1 0  1  0  2
##          2023 2 4 3 2 3 8 4 0 0  0  0  0
```

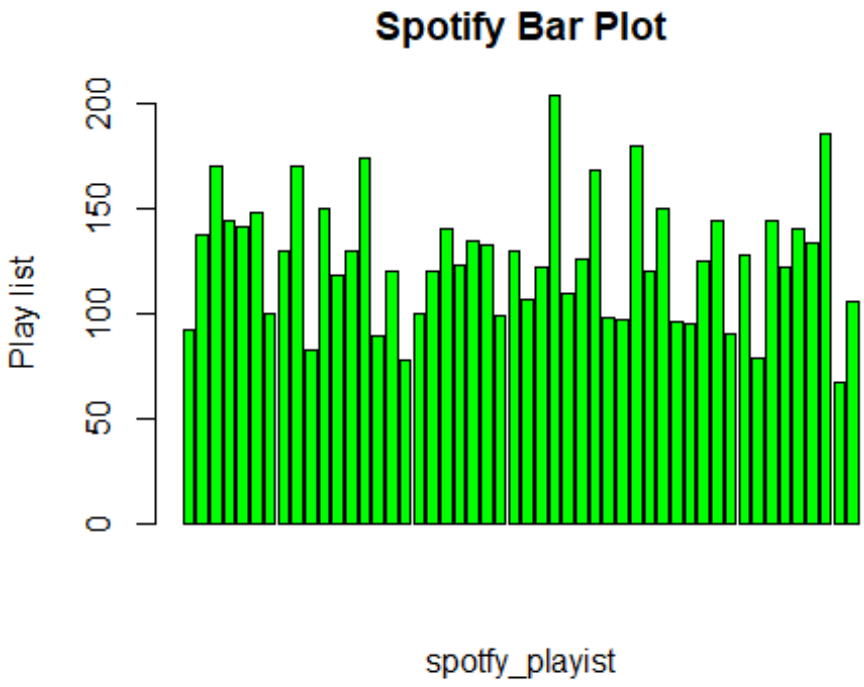
Transform Spotify_Playlist to Rank wise

```
log_rank <- log(spotify$spty_plists)

print(log_rank)
```

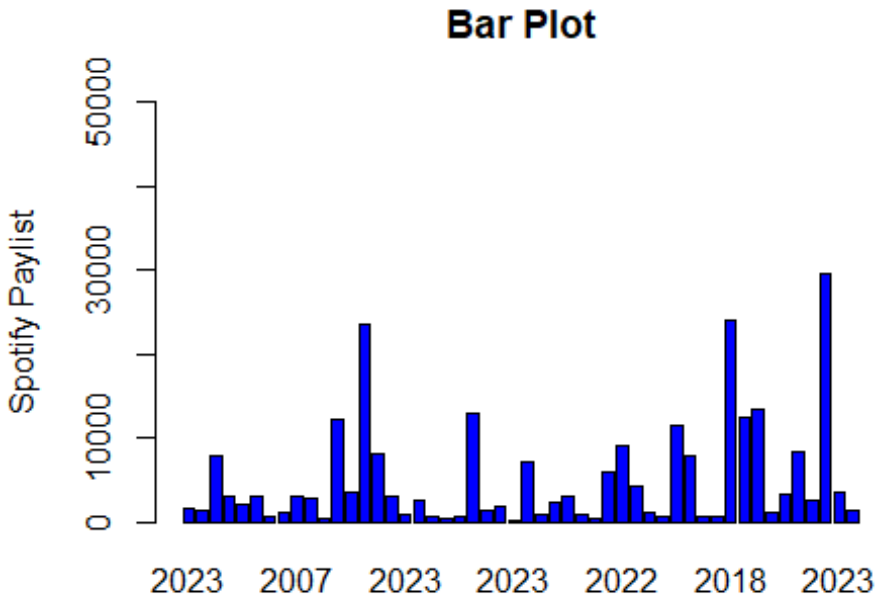
```
##  [1]  7.295735  7.242082  8.969287  8.049746  7.689829  8.035926  6.570883
##  [8]  6.999422  7.990577  7.964156  6.045005  9.410092  8.168486 10.067942
## [15]  9.000730  7.986845  6.771936  7.867106  6.390241  5.805135  6.246107
## [22]  9.461799  7.180070  7.573017  5.521461  8.869539  6.755769  7.791523
## [29]  8.002360  6.761573  5.583496  8.705497  9.114050  8.362642  7.047517
## [36]  6.510258  9.344347  8.965718  6.369901  6.539586 10.089718  9.432043
## [43]  9.502039  7.018402  8.123261  9.039671  7.817223 10.293365  8.133881
## [50]  7.168580
```

Bar Plot

```
# Create a bar plot

barplot(spotify$bpm,
        xlab = 'spotfy_playist', ylim = c(0,200), ylab = 'Play list',
        main = 'Spotify Bar Plot', col = 'green')
```




```r
barplot(spotify$spty_plists, names.arg = spotify$released_year, col = "blue",
main = "Bar Plot", ylab = "Spotify Paylist", ylim = c(0,50000),
        num_ticks <- 5)
```



Scatter Polt

```
plot(spotify$released_year, spotify$deezer_plist,
     type = "p",
     col = "blue",
     main = "Scatter Plot",
     xlab = "Released Year",
     ylab = "Deezer Playlist")
```