Assignment_1

2023-09-09

```
##Dataset used is Spotify Music Data, retrieved from Kaggle. The dataset
details the top songs from 2010-2019, including artist + title, genre,
year, and quantitative song details such as BPM.
```

```
install.packages("ggplot2", repos = "http://cran.us.r-project.org")
```

```
## Installing package into 'C:/Users/13308/AppData/Local/R/win-library/4.2'
## (as 'lib' is unspecified)
```

```
## package 'ggplot2' successfully unpacked and MD5 sums checked
##
## The downloaded binary packages are in
##  C:\Users\13308\AppData\Local\Temp\RtmpIh1dQL\downloaded_packages
```

```
library("ggplot2")
```

```
## Warning: package 'ggplot2' was built under R version 4.2.3
```

```
library(readr)
```

```
## Warning: package 'readr' was built under R version 4.2.3
```

```
Spotify_Music_Data <- read_csv("Spotify_Music_Data.csv")
```

```
## New names:
## • `` -> `...1`
```

```
## Rows: 603 Columns: 15
## ── Column specification
────────────────────────────────────────────────────────
## Delimiter: ","
## chr  (3): title, artist, top genre
## dbl (12): ...1, year, bpm, nrgy, dnce, dB, live, val, dur, acous, spch,
pop
##
## ℹ Use `spec()` to retrieve the full column specification for this data.
## ℹ Specify the column types or set `show_col_types = FALSE` to quiet this
message.
```

```
View(Spotify_Music_Data)
```

```
##Summary and descriptive statistics of variables
```

```r
summary(Spotify_Music_Data)
```

```
##       ...1          title              artist           top genre
##  Min.   :  1.0   Length:603         Length:603         Length:603
##  1st Qu.:151.5   Class :character   Class :character   Class :character
##  Median :302.0   Mode  :character   Mode  :character   Mode  :character
##  Mean   :302.0
##  3rd Qu.:452.5
##  Max.   :603.0
##       year           bpm              nrgy           dnce
##  Min.   :2010   Min.   :  0.0   Min.   : 0.0   Min.   : 0.00
##  1st Qu.:2013   1st Qu.:100.0   1st Qu.:61.0   1st Qu.:57.00
##  Median :2015   Median :120.0   Median :74.0   Median :66.00
##  Mean   :2015   Mean   :118.5   Mean   :70.5   Mean   :64.38
##  3rd Qu.:2017   3rd Qu.:129.0   3rd Qu.:82.0   3rd Qu.:73.00
##  Max.   :2019   Max.   :206.0   Max.   :98.0   Max.   :97.00
##        dB               live            val             dur
##  Min.   :-60.000   Min.   : 0.00   Min.   : 0.00   Min.   :134.0
##  1st Qu.: -6.000   1st Qu.: 9.00   1st Qu.:35.00   1st Qu.:202.0
##  Median : -5.000   Median :12.00   Median :52.00   Median :221.0
##  Mean   : -5.579   Mean   :17.77   Mean   :52.23   Mean   :224.7
##  3rd Qu.: -4.000   3rd Qu.:24.00   3rd Qu.:69.00   3rd Qu.:239.5
##  Max.   : -2.000   Max.   :74.00   Max.   :98.00   Max.   :424.0
##      acous             spch             pop
##  Min.   : 0.00   Min.   : 0.000   Min.   : 0.00
##  1st Qu.: 2.00   1st Qu.: 4.000   1st Qu.:60.00
##  Median : 6.00   Median : 5.000   Median :69.00
##  Mean   :14.33   Mean   : 8.358   Mean   :66.52
##  3rd Qu.:17.00   3rd Qu.: 9.000   3rd Qu.:76.00
##  Max.   :99.00   Max.   :48.000   Max.   :99.00
```

```r
summary(Spotify_Music_Data$artist)
```

```
##    Length     Class      Mode
##       603 character character
```

```r
summary(Spotify_Music_Data$artist)
```

```
##    Length     Class      Mode
##       603 character character
```

```r
summary(Spotify_Music_Data$bpm)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##     0.0   100.0   120.0   118.5   129.0   206.0
```

```r
summary(Spotify_Music_Data$top.genre)
```

```
## Warning: Unknown or uninitialised column: `top.genre`.
```

```
## Length  Class   Mode
##      0   NULL   NULL
```

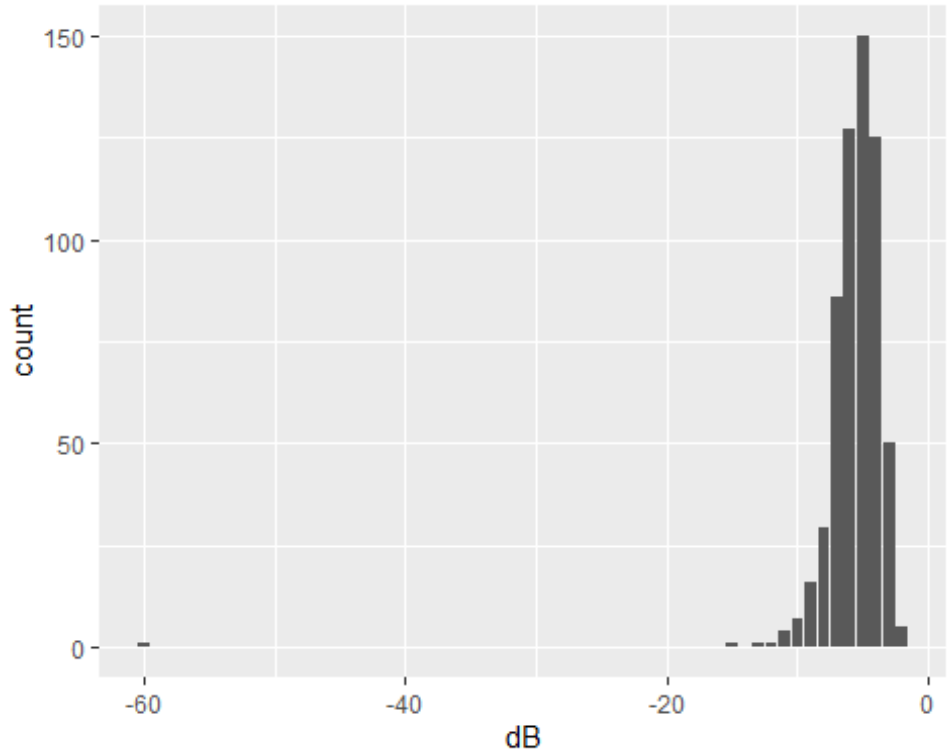
```
summary(Spotify_Music_Data$dur)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   134.0   202.0   221.0   224.7   239.5   424.0
```

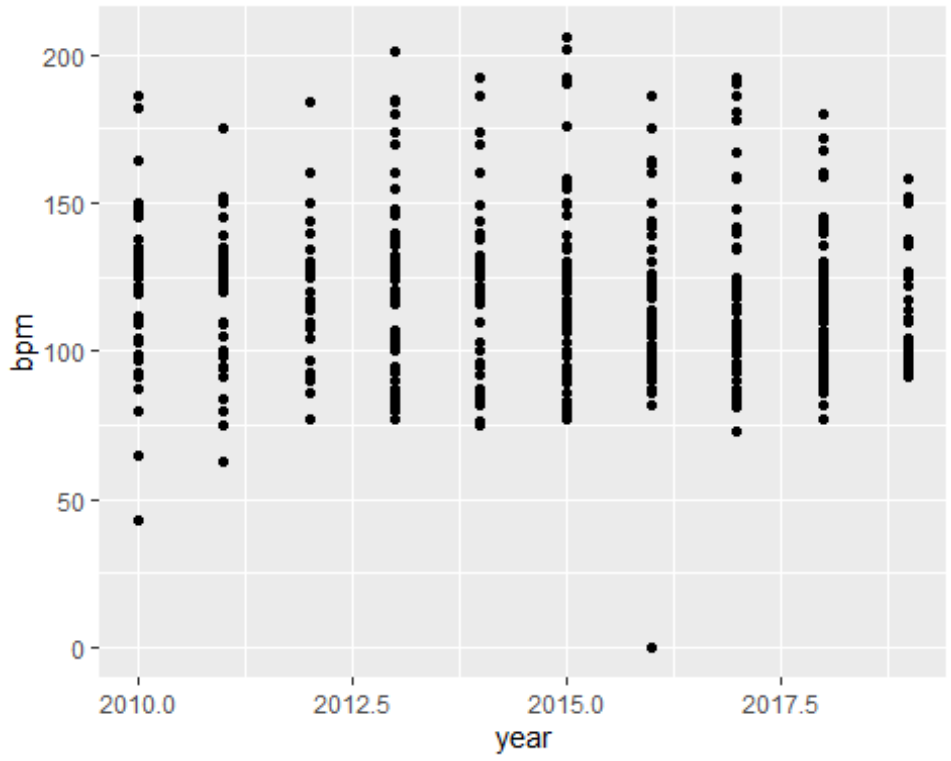
```
##Converting variable "bpm" from integer to numeric

Spotify_Music_Data$bpm <- as.numeric(Spotify_Music_Data$bpm)

##Plotting of dB variable- loudness of song. No significant findings in
results.

install.packages("ggplot2")
```

```
## Warning: package 'ggplot2' is in use and will not be installed
```

```
library(ggplot2)

ggplot(data = Spotify_Music_Data, aes(x = dB)) + geom_bar()
```




```
##Scatterplot- bpm of songs, per year. No significant findings in results.

ggplot(data = Spotify_Music_Data, aes(x = year, y = bpm)) + geom_point()
```


200
150
100
50
0
bpm
2010.0
2012.5
2015.0
2017.5
year