Assignment 2

Daniel

options(repos = c(CRAN = "https://cran.rstudio.com"))  
  
  
install.packages('vtable')

The downloaded binary packages are in  
 /var/folders/r5/4hf970\_s3c51wdg8w3x77g9w0000gn/T//RtmpOWcZuu/downloaded\_packages

library(vtable)

Loading required package: kableExtra

library(tidyverse)

── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──  
✔ dplyr 1.1.1 ✔ readr 2.1.4  
✔ forcats 1.0.0 ✔ stringr 1.5.0  
✔ ggplot2 3.4.2 ✔ tibble 3.2.1  
✔ lubridate 1.9.2 ✔ tidyr 1.3.0  
✔ purrr 1.0.1

── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
✖ dplyr::filter() masks stats::filter()  
✖ dplyr::group\_rows() masks kableExtra::group\_rows()  
✖ dplyr::lag() masks stats::lag()  
ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors

library(rio)  
d <- import('Spotify\_top50.csv')  
  
install\_formats()

[1] TRUE

sumtable(d)

Summary Statistics

| Variable | N | Mean | Std. Dev. | Min | Pctl. 25 | Pctl. 75 | Max |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Rank | 50 | 26 | 15 | 1 | 13 | 38 | 50 |
| Beats.Per.Minute | 50 | 120 | 31 | 85 | 96 | 138 | 190 |
| Energy | 50 | 64 | 14 | 32 | 55 | 75 | 88 |
| Danceability | 50 | 71 | 12 | 29 | 67 | 80 | 90 |
| Loudness..dB.. | 50 | -5.7 | 2.1 | -11 | -6.8 | -4 | -2 |
| Liveness | 50 | 15 | 11 | 5 | 8 | 16 | 58 |
| Valence. | 50 | 55 | 22 | 10 | 38 | 70 | 95 |
| Length. | 50 | 201 | 39 | 115 | 177 | 218 | 309 |
| Acousticness.. | 50 | 22 | 19 | 1 | 8.2 | 34 | 75 |
| Speechiness. | 50 | 12 | 11 | 3 | 5 | 15 | 46 |
| Popularity | 50 | 88 | 4.5 | 70 | 86 | 91 | 95 |

popularity\_by\_artist <- d %>%  
 group\_by(Artist.Name) %>%  
 summarize(avg\_popularity = mean(Popularity))  
   
appearances\_by\_artist <- d %>%  
 count(Artist.Name, sort = TRUE)  
  
popularity\_by\_artist <- popularity\_by\_artist %>%   
 arrange(desc(avg\_popularity))  
  
artist\_popularity = left\_join(  
 popularity\_by\_artist,  
 appearances\_by\_artist,  
 by = "Artist.Name")  
  
print(artist\_popularity)

# A tibble: 38 × 3  
 Artist.Name avg\_popularity n  
 <chr> <dbl> <int>  
 1 Bad Bunny 93 1  
 2 Post Malone 92.5 2  
 3 Anuel AA 92 1  
 4 Billie Eilish 92 2  
 5 Drake 92 1  
 6 Lil Tecca 92 1  
 7 Daddy Yankee 91 1  
 8 Lizzo 91 1  
 9 Lunay 91 1  
10 MEDUZA 91 1  
# ℹ 28 more rows

popularity\_by\_song <- d %>%  
 select(Track.Name, Danceability, Popularity) %>%  
 mutate(Danceability\_Popularity = Danceability + Popularity) %>%  
 arrange(desc(Danceability\_Popularity))  
  
print(popularity\_by\_song)

Track.Name  
1 Con Altura  
2 Old Town Road - Remix  
3 Money In The Grave (Drake ft. Rick Ross)  
4 Talk  
5 Lalala  
6 China  
7 Soltera - Remix  
8 The London (feat. J. Cole & Travis Scott)  
9 Loco Contigo (feat. J. Balvin & Tyga)  
10 Ransom  
11 Sunflower - Spider-Man: Into the Spider-Verse  
12 7 rings  
13 0.958333333  
14 You Need To Calm Down  
15 Never Really Over  
16 Otro Trago  
17 bad guy  
18 LA CANCIÓN  
19 Dance Monkey  
20 Con Calma  
21 I Don't Care (with Justin Bieber)  
22 No Me Conoce - Remix  
23 Sucker  
24 Truth Hurts  
25 It's You  
26 Panini  
27 Otro Trago - Remix  
28 Piece Of Your Heart  
29 Antisocial (with Travis Scott)  
30 fuck, i'm lonely (with Anne-Marie) - from “13 Reasons Why: Season 3”  
31 Higher Love  
32 Happier  
33 Cross Me (feat. Chance the Rapper & PnB Rock)  
34 bad guy (with Justin Bieber)  
35 Señorita  
36 Summer Days (feat. Macklemore & Patrick Stump of Fall Out Boy)  
37 Te Robaré  
38 Callaita  
39 One Thing Right  
40 QUE PRETENDES  
41 Goodbyes (Feat. Young Thug)  
42 No Guidance (feat. Drake)  
43 Beautiful People (feat. Khalid)  
44 Call You Mine  
45 Shallow  
46 If I Can't Have You  
47 How Do You Sleep?  
48 Someone You Loved  
49 boyfriend (with Social House)  
50 Takeaway  
 Danceability Popularity Danceability\_Popularity  
1 88 88 176  
2 88 87 175  
3 83 92 175  
4 90 84 174  
5 84 88 172  
6 79 92 171  
7 80 91 171  
8 80 89 169  
9 82 86 168  
10 75 92 167  
11 76 91 167  
12 78 89 167  
13 78 89 167  
14 77 90 167  
15 77 89 166  
16 75 91 166  
17 70 95 165  
18 75 90 165  
19 82 83 165  
20 74 91 165  
21 80 84 164  
22 81 83 164  
23 84 80 164  
24 72 91 163  
25 73 89 162  
26 70 91 161  
27 73 87 160  
28 68 91 159  
29 72 87 159  
30 81 78 159  
31 69 88 157  
32 69 88 157  
33 75 82 157  
34 67 89 156  
35 76 79 155  
36 66 89 155  
37 67 88 155  
38 61 93 154  
39 66 88 154  
40 64 89 153  
41 58 94 152  
42 70 82 152  
43 64 86 150  
44 59 88 147  
45 57 87 144  
46 69 70 139  
47 48 90 138  
48 50 88 138  
49 40 85 125  
50 29 84 113

popularity\_by\_song <- d %>%  
 mutate(Danceability\_Popularity = Danceability + Popularity) %>%  
 arrange(desc(Danceability\_Popularity))  
  
print(popularity\_by\_song)

Rank Track.Name  
1 45 Con Altura  
2 9 Old Town Road - Remix  
3 15 Money In The Grave (Drake ft. Rick Ross)  
4 44 Talk  
5 19 Lalala  
6 2 China  
7 24 Soltera - Remix  
8 34 The London (feat. J. Cole & Travis Scott)  
9 12 Loco Contigo (feat. J. Balvin & Tyga)  
10 7 Ransom  
11 18 Sunflower - Spider-Man: Into the Spider-Verse  
12 32 7 rings  
13 33 0.958333333  
14 42 You Need To Calm Down  
15 35 Never Really Over  
16 37 Otro Trago  
17 10 bad guy  
18 17 LA CANCIÓN  
19 27 Dance Monkey  
20 29 Con Calma  
21 6 I Don't Care (with Justin Bieber)  
22 23 No Me Conoce - Remix  
23 39 Sucker  
24 20 Truth Hurts  
25 28 It's You  
26 22 Panini  
27 14 Otro Trago - Remix  
28 21 Piece Of Your Heart  
29 38 Antisocial (with Travis Scott)  
30 40 fuck, i'm lonely (with Anne-Marie) - from “13 Reasons Why: Season 3”  
31 41 Higher Love  
32 48 Happier  
33 50 Cross Me (feat. Chance the Rapper & PnB Rock)  
34 25 bad guy (with Justin Bieber)  
35 1 Señorita  
36 36 Summer Days (feat. Macklemore & Patrick Stump of Fall Out Boy)  
37 47 Te Robaré  
38 11 Callaita  
39 46 One Thing Right  
40 30 QUE PRETENDES  
41 5 Goodbyes (Feat. Young Thug)  
42 16 No Guidance (feat. Drake)  
43 4 Beautiful People (feat. Khalid)  
44 49 Call You Mine  
45 43 Shallow  
46 26 If I Can't Have You  
47 8 How Do You Sleep?  
48 13 Someone You Loved  
49 3 boyfriend (with Social House)  
50 31 Takeaway  
 Artist.Name Genre Beats.Per.Minute Energy Danceability  
1 ROSALÍA r&b en espanol 98 69 88  
2 Lil Nas X country rap 136 62 88  
3 Drake canadian hip hop 101 50 83  
4 Khalid pop 136 40 90  
5 Y2K canadian hip hop 130 39 84  
6 Anuel AA reggaeton flow 105 81 79  
7 Lunay latin 92 78 80  
8 Young Thug atl hip hop 98 59 80  
9 DJ Snake dance pop 96 71 82  
10 Lil Tecca trap music 180 64 75  
11 Post Malone dfw rap 90 48 76  
12 Ariana Grande dance pop 140 32 78  
13 Maluma reggaeton 96 71 78  
14 Taylor Swift dance pop 85 68 77  
15 Katy Perry dance pop 100 88 77  
16 Sech panamanian pop 176 70 75  
17 Billie Eilish electropop 135 43 70  
18 J Balvin latin 176 65 75  
19 Tones and I australian pop 98 59 82  
20 Daddy Yankee latin 94 86 74  
21 Ed Sheeran pop 102 68 80  
22 Jhay Cortez reggaeton flow 92 79 81  
23 Jonas Brothers boy band 138 73 84  
24 Lizzo escape room 158 62 72  
25 Ali Gatie canadian hip hop 96 46 73  
26 Lil Nas X country rap 154 59 70  
27 Sech panamanian pop 176 79 73  
28 MEDUZA pop house 124 74 68  
29 Ed Sheeran pop 152 82 72  
30 Lauv dance pop 95 56 81  
31 Kygo edm 104 68 69  
32 Marshmello brostep 100 79 69  
33 Ed Sheeran pop 95 79 75  
34 Billie Eilish electropop 135 45 67  
35 Shawn Mendes canadian pop 117 55 76  
36 Martin Garrix big room 114 72 66  
37 Nicky Jam latin 176 75 67  
38 Bad Bunny reggaeton 176 62 61  
39 Marshmello brostep 88 62 66  
40 J Balvin latin 93 79 64  
41 Post Malone dfw rap 150 65 58  
42 Chris Brown dance pop 93 45 70  
43 Ed Sheeran pop 93 65 64  
44 The Chainsmokers edm 104 70 59  
45 Lady Gaga dance pop 96 39 57  
46 Shawn Mendes canadian pop 124 82 69  
47 Sam Smith pop 111 68 48  
48 Lewis Capaldi pop 110 41 50  
49 Ariana Grande dance pop 190 80 40  
50 The Chainsmokers edm 85 51 29  
 Loudness..dB.. Liveness Valence. Length. Acousticness.. Speechiness.  
1 -4 5 75 162 39 12  
2 -6 11 64 157 5 10  
3 -4 12 10 205 10 5  
4 -9 6 35 198 5 13  
5 -8 14 50 161 18 8  
6 -4 8 61 302 8 9  
7 -4 44 80 266 36 4  
8 -7 13 18 200 2 15  
9 -4 15 38 185 28 7  
10 -6 7 23 131 2 29  
11 -6 7 91 158 56 5  
12 -11 9 33 179 59 33  
13 -5 9 68 176 22 28  
14 -6 7 73 171 1 5  
15 -5 32 39 224 19 6  
16 -5 11 62 226 14 34  
17 -11 10 56 194 33 38  
18 -6 11 43 243 15 32  
19 -6 18 54 210 69 10  
20 -3 6 66 193 11 6  
21 -5 9 84 220 9 4  
22 -4 9 58 309 14 7  
23 -5 11 95 181 4 6  
24 -3 12 41 173 11 11  
25 -7 19 40 213 37 3  
26 -6 12 48 115 34 8  
27 -2 6 76 288 7 20  
28 -7 7 63 153 4 3  
29 -5 36 91 162 13 5  
30 -6 6 68 199 48 7  
31 -7 10 40 228 2 3  
32 -3 17 67 214 19 5  
33 -6 7 61 206 21 12  
34 -11 12 68 195 25 30  
35 -6 8 75 191 4 3  
36 -7 14 32 164 18 6  
37 -4 8 80 202 24 6  
38 -5 24 24 251 60 31  
39 -2 58 44 182 7 5  
40 -4 36 94 222 3 25  
41 -4 11 18 175 45 7  
42 -7 16 14 261 12 15  
43 -8 8 55 198 12 19  
44 -6 41 50 218 23 3  
45 -6 23 32 216 37 3  
46 -4 13 87 191 49 6  
47 -5 8 35 202 15 9  
48 -6 11 45 182 75 3  
49 -4 16 70 186 12 46  
50 -8 10 36 210 12 4  
 Popularity Danceability\_Popularity  
1 88 176  
2 87 175  
3 92 175  
4 84 174  
5 88 172  
6 92 171  
7 91 171  
8 89 169  
9 86 168  
10 92 167  
11 91 167  
12 89 167  
13 89 167  
14 90 167  
15 89 166  
16 91 166  
17 95 165  
18 90 165  
19 83 165  
20 91 165  
21 84 164  
22 83 164  
23 80 164  
24 91 163  
25 89 162  
26 91 161  
27 87 160  
28 91 159  
29 87 159  
30 78 159  
31 88 157  
32 88 157  
33 82 157  
34 89 156  
35 79 155  
36 89 155  
37 88 155  
38 93 154  
39 88 154  
40 89 153  
41 94 152  
42 82 152  
43 86 150  
44 88 147  
45 87 144  
46 70 139  
47 90 138  
48 88 138  
49 85 125  
50 84 113

# **The Best Party Songs of 2019 Using Spotify’s Track Properties**

