

# Week 10 Data Story Submission

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2024-03-26

## Week 8

**What is the topic that you have finalized? (Answer in 1 or 2 sentences)**

The topic that I have finalized is about the correlation between the popularity of Spotify songs and the elements of the music.

**What are the data sources that you have curated so far? (Answer 1 or 2 sentences).**

The data source I have obtained is for free, and originates from the following link: <https://www.kaggle.com/datasets/sujaykapadnis/spotify-songs>

The data set contains information on the track popularity, danceability of the music, energy of the music and liveliness of the music.

```
# Data set
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.5.0      v tibble    3.2.1
## v lubridate  1.9.3      v tidyr     1.3.0
## v purrr      1.0.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
Spotify <- read.csv("spotify_songs.csv")
```

```
# First 5 rows of the data set
head(Spotify, 5)
```

```
##           track_id                                     track_name
## 1 6f807x0ima9a1j3VPbc7VN I Don't Care (with Justin Bieber) - Loud Luxury Remix
## 2 0r7CVbZTWZgbTCYdfa2P31           Memories - Dillon Francis Remix
## 3 1z1Hg7Vb0AhHdiEmnDE791           All the Time - Don Diablo Remix
## 4 75FpbthrwQmzH1BJLuGdC7           Call You Mine - Keanu Silva Remix
## 5 1e8PAfcKUYoKkxPhrHqw4x           Someone You Loved - Future Humans Remix
```

```

##      track_artist track_popularity      track_album_id
## 1      Ed Sheeran              66 2oCs0DGTsR098Gh5ZS12Cx
## 2      Maroon 5                67 63rPS0264uRjW1X5E6cWv6
## 3      Zara Larsson            70 1HoSmj2eLcsrR0vE9gThr4
## 4 The Chainsmokers              60 1nqYs0ef1yKKuG0Vchbsk6
## 5      Lewis Capaldi           69 7m7vv9wlQ4i0LFuJiE2zsQ
##
##      track_album_name
## 1 I Don't Care (with Justin Bieber) [Loud Luxury Remix]
## 2      Memories (Dillon Francis Remix)
## 3      All the Time (Don Diablo Remix)
## 4      Call You Mine - The Remixes
## 5      Someone You Loved (Future Humans Remix)
##      track_album_release_date playlist_name      playlist_id playlist_genre
## 1      2019-06-14      Pop Remix 37i9dQZF1DXcZDD7cfEKhW      pop
## 2      2019-12-13      Pop Remix 37i9dQZF1DXcZDD7cfEKhW      pop
## 3      2019-07-05      Pop Remix 37i9dQZF1DXcZDD7cfEKhW      pop
## 4      2019-07-19      Pop Remix 37i9dQZF1DXcZDD7cfEKhW      pop
## 5      2019-03-05      Pop Remix 37i9dQZF1DXcZDD7cfEKhW      pop
##      playlist_subgenre danceability energy key loudness mode speechiness
## 1      dance pop          0.748 0.916 6   -2.634 1     0.0583
## 2      dance pop          0.726 0.815 11  -4.969 1     0.0373
## 3      dance pop          0.675 0.931 1   -3.432 0     0.0742
## 4      dance pop          0.718 0.930 7   -3.778 1     0.1020
## 5      dance pop          0.650 0.833 1   -4.672 1     0.0359
##      acousticness instrumentalness liveness valence  tempo duration_ms
## 1      0.1020          0.00e+00  0.0653  0.518 122.036  194754
## 2      0.0724          4.21e-03  0.3570  0.693 99.972  162600
## 3      0.0794          2.33e-05  0.1100  0.613 124.008  176616
## 4      0.0287          9.43e-06  0.2040  0.277 121.956  169093
## 5      0.0803          0.00e+00  0.0833  0.725 123.976  189052

```

## Week 9

**What is the question that you are going to answer?**

Does the popularity of Spotify music and correlation to elements of the music suggest any insightful reflections on how people remember things?

**Why is this an important question?**

Despite not being able to recall the majority of events in their lives, Dr Timothy Byron and Dr Jadey O'Regan (2022) highlights that many individuals have the ability to remember a song, even if they have not heard it in a long time. This ability to remember a song may be attributed to the catchiness and the tempo of the song which allows the song to remain memorable and popular for a long time once learned. As the popularity of the song is dependent on how memorable it is to individuals (Byron & O'Regan, 2022), understanding the elements of popular music reflects the essential components that help people to remember things.

**Which rows and columns of the dataset will be used to answer this question?**

I will use the columns: Track popularity, Playlist Genre, Danceability, Valence, Speechiness, Tempo,

As of submitting this document, I intend to work with the first 50 row from each playlist genre as the data is ordered based on the 6 different playlist genre.

## Week 10

**List the visualizations that you are going to use in your project (Answer: What are the variables that you are going to plot? How will it answer your larger question?)**

By looking at the elements of songs such as danceability and valence, I want to find out if there is a significant element that affects the popularity of the music. Through this comparison, I am to find out if there is any patterns in how people remember things.

**How do you plan to make it interactive? (Answer: features of ggplot2/shiny/markdown do you plan to use to make the story interactive)**

I will repurpose the Shiny app used in Week 9's Challenge to allow other users to plot the graphs based on the variables that they are interested in my data sets. This enables them to see the different patterns shown in the ggplot that I will create in the Shiny app

### Spotify Music

#### Popularity vs Elements of Music

**Dataset**

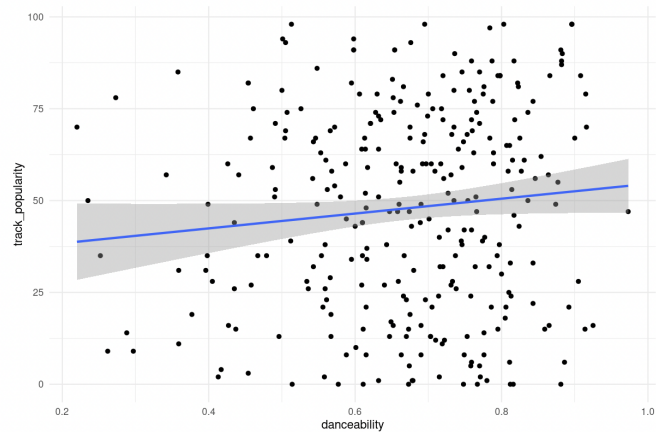
songs

**Select x-axis variable:**

danceability

**Select y-axis variable:**

track\_popularity



**What concepts incorporated in your project were taught in the course and which ones were self-learnt? (Answer: Create a table with topics in one column and Weeks in the other to indicate which concept taught in which week is being used. Leave the entry of the Week column empty for self-learnt concepts)**

Topics	Weeks
ggplot	2,7
basics of Shiny app	8
Quarto website set-up	8
conditional outputting different variables from a curated list on Shiny	

### References

Byron, T., & O'Regan, J. (2022). *Hooks in popular music*. NSW, Australia.  
Springer Nature.