Information Visualization

CHECKPOINT I: Visualization Proposal

G17

1. Domain

"How weather influences the music we stream"

Everybody listens to music, and nowadays streaming is the main way people do it**.** Spotify is the most used streaming service in the world, with 83 million daily users in 53 countries**.** By crossing this data with daily weather conditions for 2017 on each of the 53 countries, we can observe how each country's weather influences its people music habits.

For example, in a rainy day, people tend to listen to slower tracks, rather than more pumped up ones. During snow days, people tend to listen to "*Let It Snow*" more than they listen to "*Despacito*".

This kind of information is interesting to analyze, as it is clear the weather conditions are a big factor in what we decide to listen.

Given a song or an artist, the parameters that can help visualize this information are:

- 🏆 Position on Spotify charts
- 🎵 Title of song
- 🎤 Artist name of musician or group
- # Number of streams on Spotify
- 📆 Date
- 🇵🇹 Country
- ☀️ Mean Temperature
- 💨 Wind Speed
- 🌫️ Fog
- 🌧️ Precipitation
- ❄️ Snow
- 🌅 Visibility
- ⚡ Thunder
- 🌪️ Tornado
- 🌨️ Hail

2. Dataset

Given our theme, we have two distinct datasets:

- The **music** dataset, which corresponds to the top 200 songs streamed each day on Spotify, for each of the 53 countries it available in, from 2017/01/01 to 2018/01/09, which we obtained here: http://bit.do/MusicDataset;
- The **weather** dataset, which corresponds to the 2017 daily weather conditions for each capital of the 53 countries Spotify is available in, which we obtained here: http://bit.do/WeatherDataset;

3. Tasks to be supported

- Task 1: **Discover** — Find music to listen based on the season of the year, weather conditions and other factors;
- Task 2: **Identify** — Given a weather condition, identify which songs or artists are most likely to be streamed and vice-versa;
- Task 3: **Compare —** Select multiple songs/countries to see how each country's weather conditions influences what people stream;
- Task 4: **Analyze —** Study how music habits change with the weather.

4. Example Questions

- 1: On a sunny day, which song is the most listened worldwide? — Task 2
- 2: If it's raining, what genre do people listen the most in Ecuador? — Task 1
- 3: In what weather conditions is "*Despacito"* most likely to be heard? — Task 4
- 4: Between Portugal (winter) and Australia (summer), where was "*All I Want For Christmas Is You*" most streamed during Christmas? — Task 3
- 5: How likely is "*Let It Snow*" to be streamed during snow days? — Task 2

5. Data Sample

```
(from "spotify.csv")
position; trackname; artist; streams; url; date; country
19 Starboy, The Weeknd, 7006, https://open.spotify.com/track/5aAx2yezTd8zXrkmtKl66Z,
2017-01-01, ec

(from "weather.csv")
station; date; temperature; visibility; windspeed; precipitation; indicators
723150, 20170101, 23.6, 6.0, 3.2, 0.00, 100000
```