## Codebook

- **Popularity** (Numerical): Popularity score (0–100) assigned by Spotify, reflecting recent streaming activity.
- Explicit (Categorical, Binary): Indicates if the track contains explicit content (1 = explicit, 0 = clean).
- **Danceability** (*Numerical*): Measures from 0 1 how suitable a track is for dancing, based on tempo, rhythm stability, beat strength, and other musical elements.
- Energy (Numerical): Represents the intensity and activity of the track, with higher values indicating more energetic and fast-paced tracks (from 0 to 1)
- **Key** (*Categorical*): Indicates the keys of the track ranging from C, C#, D, D#, E, F, F#, G,G#, A, A#, to B (for example, 0 = C, ..., 11 = B).
- Loudness (Numerical): Measures the overall loudness of the track in decibels (dB), averaged across the entire track.
- Mode (Categorical, Binary): Modality of the track, indicating whether it is in a major (1) or minor (0) key.
- **Speechiness** (*Numerical*): From 0 to 1, detects the presence of spoken words in a track, with higher values indicating a more speech-like quality.
- **Acousticness** (*Numerical*): From 0 to 1, the probability that the track is acoustic, with values closer to 1 indicating a higher likelihood of being acoustic.
- **Instrumentalness** (*Numerical*): From 0 to 1, estimates the likelihood that the track is instrumental, with higher values indicating a lack of vocals.
- **Liveness** (*Numerical*): From 0 to 1, detects the presence of a live audience in the recording, with higher values indicating a greater likelihood of a live performance.
- **Valence** (*Numerical*): From 0 to 1, indicates the musical positiveness of a track, with higher values reflecting more positive or cheerful sounds.
- **Tempo** (Numerical): The speed or pace of the track, measured in beats per minute (BPM).
- **Time.Signature** (*Numerical*): Indicates the time signature, showing the number of beats per bar, typically 3 or 4.
- Release. Year (Numerical): The year the track was released, providing a temporal context for the music.
- **genreSimplified** (*Categorical*): A simplified or consolidated genre label for each track, where genres are categorized for clearer analysis (e.g., grouping "pop," "rock," "both pop and rock", and "other" as our genres).