

# Song Playlist Experiments

In the song playlist experiments, workers from AMT are recommended playlists for four different scenarios: long drive, theme party, Sunday morning, and learning a music style.

## Task Dataset

The one million dataset does not have a genre.

Task Database	Song Database
Tasktype <ul style="list-style-type: none"><li>Task_type_id</li><li>Task_title</li><li><b>Task_keywords</b> (text[])</li><li><b>Duration</b> (integer)</li><li><b>Creation_date</b> (date)</li><li><b>Expected_pay</b> (real)</li><li>Requester</li><li>Task_description</li></ul>	Song <ul style="list-style-type: none"><li>Song_id</li><li>Song_Title</li><li>Artist (text)</li><li><b>Tempo</b> (real)</li><li><b>Period</b> (integer)</li><li><b>Genre</b> (text)</li><li><b>Popularity</b> (integer)</li><li>Duration</li><li>Acousticness</li></ul>

In the Crowdsourcing experiments, the dimensions are the ones in red.

In the Song playlist experiments, the dimensions are the ones in green.

---

The dataset contains 727 songs from 54 albums, 47 artists, and 10 genres. These songs are from albums that won the Grammy Best Album of the Year Award from 1961 to 2020. We sourced the list of albums and their corresponding genres from Wikipedia, queried Spotify for the album IDs, then used the Spotify Developer API to get the albums' and songs' metadata. We then excluded songs from genres whose genre has songs less than 50 or the number of songs in the playlists we generate.

Each scenario, we examine a different problem variant.

Context 1: long drive driving (tempo, popularity)

Context 2: theme party (period, genre)

Context 3: learning about a music style (popularity, genre)

Context 4: sunday morning music (genre, tempo)

	Long Drive	Theme Party	Sunday Morning	Learn Music
min_intra_max_inter				
min_intra_min_inter	Similar tempo, similar popularity	Similar period,		
max_intra_min_inter				
max_intra_max_inter				

Total Songs: 727  
Unique Albums: 54  
Unique Artists: 47  
Unique Genres : 10

period | count

-----+-----

1960 | 121

1970 | 93

1980 | 104

1990 | 155

2000 | 123

2010 | 131

# Experiments Flow

1. Collect 200 user profiles per context; 50 profiles per context.

**Please state your music preferences  $\$(context)$**

**Music Genre:** Please rate the following musical genres based on your interest in listening to them.

	Not Interested				Very Interested
Jazz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Folk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soul	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R & B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hip Hop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Banned Artists:** Please select artists you prefer not like to listen to.

You can select multiple artists by:

- keeping the Ctrl key pressed then clicking the names of the artists (Windows and Linux)
- keeping the Command key pressed then clicking the names of the artists (Mac).

Barbra Streisand

Beck

Bee Gees

Billie Eilish

Billy Joel

Billy Preston

Blood, Sweat, and Tears

Bob Dylan

Bob Newhart

Bonnie Raitt

Bruno Mars

Carole King

Celine Dion

Chris Thomas King

Christopher Cross

If the worker says he/she is not interested in a genre (score 1), songs belonging to that genre will be excluded.

Songs from Banned Artists will also be excluded.

2. Generate 5 playlists for every Context.  
Every playlist has 5 sets. Each set has 10 songs.  
The following are the playlists:
  - Playlist 1: min\_intra\_min\_inter
  - Playlist 2: min\_intra\_max\_inter
  - Playlist 3: max\_intra\_min\_inter
  - Playlist 4: max\_intra\_max\_inter
  - Playlist 5: no diversity

- Playlist 5 contains songs from the same period
- Randomly select a dimension (genre vs. period); Period was selected.
- Randomly selected a period.

The following are the contexts and their corresponding dimension

Context 1: long drive driving (tempo, popularity)

Context 2: theme party (period, genre)

Context 3: learning about a music style (popularity, genre)

Context 4: sunday morning music (genre, tempo)

3. Asked 280 users to evaluate playlists

- 45 per context

How much do you like this playlist?					
	Absolutely No No		Neutral	Yes	Absolutely Yes
<b>Artists</b> <i>Do you like the artists included?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Diversity</b> <i>Do you like the diversity of songs?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Recency</b> <i>Do you like the recency of the songs?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Familiarity</b> <i>Are you familiar with the songs?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<hr/> <b>Overall Rating</b> <i>What is your overall rating for this playlist?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>Very Bad</b>	<b>Bad</b>	<b>Neutral</b>	<b>Good</b>	<b>Very Good</b>

Estimated cost: \$ 336.00