

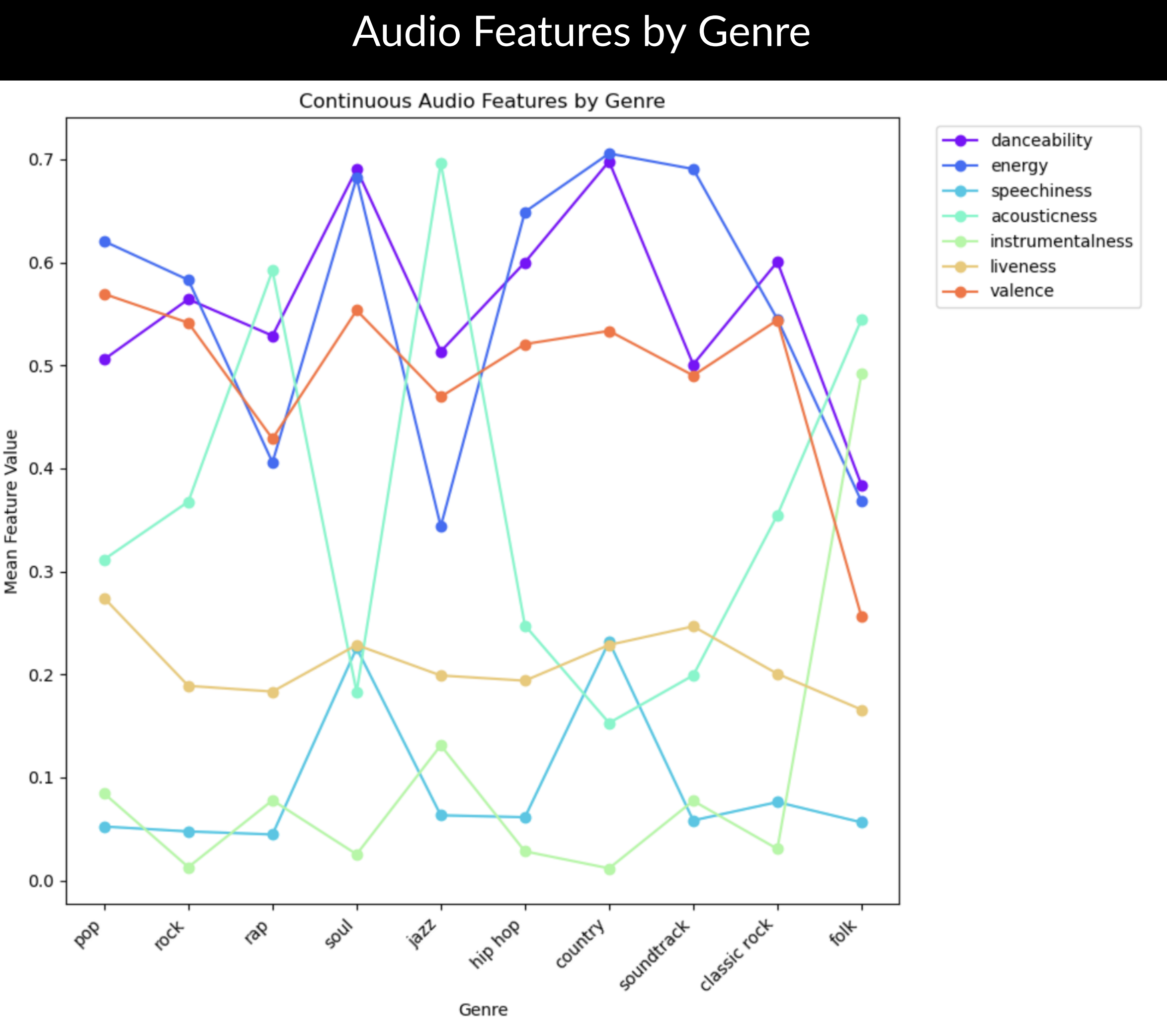
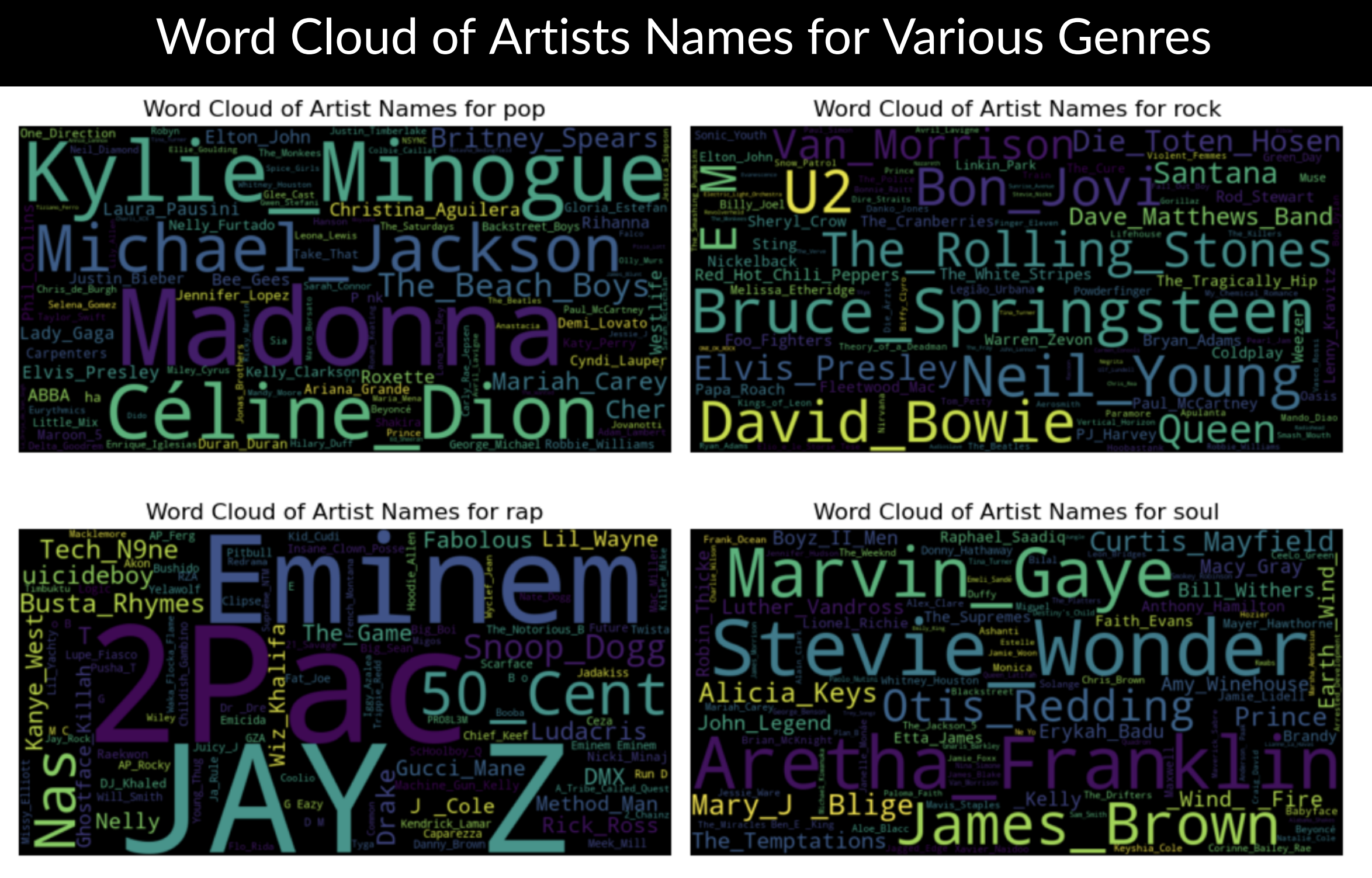
Building a Spotify Recommender System based on Audio Features in a Playlist

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Introduction

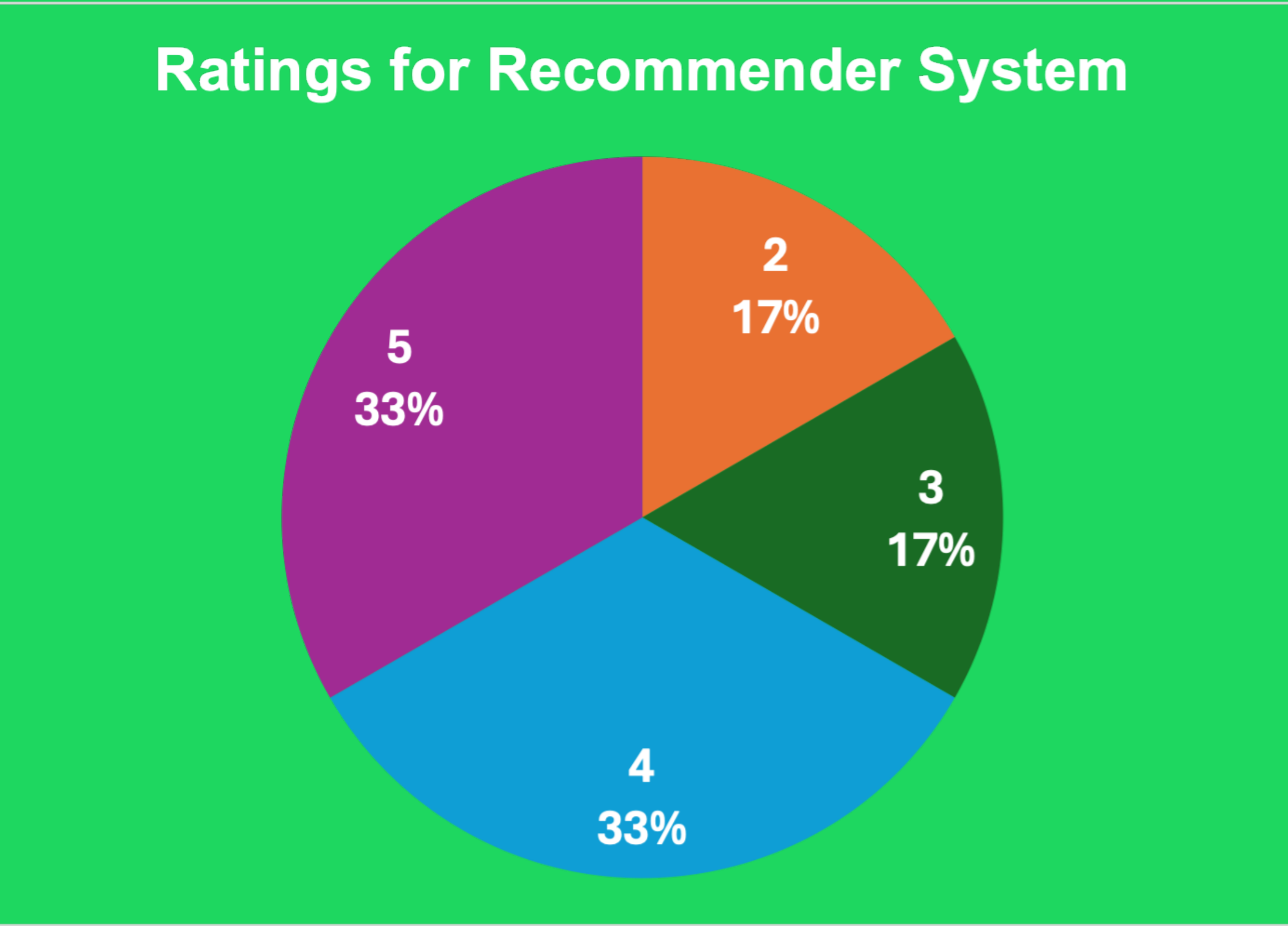
Spotify is a great way to discover new music and is constantly looking for ways to improve its recommendation systems. We aim to build a recommender system that takes in a playlist and outputs the top 5 songs based on songs in the playlist.

Exploratory Data Analysis



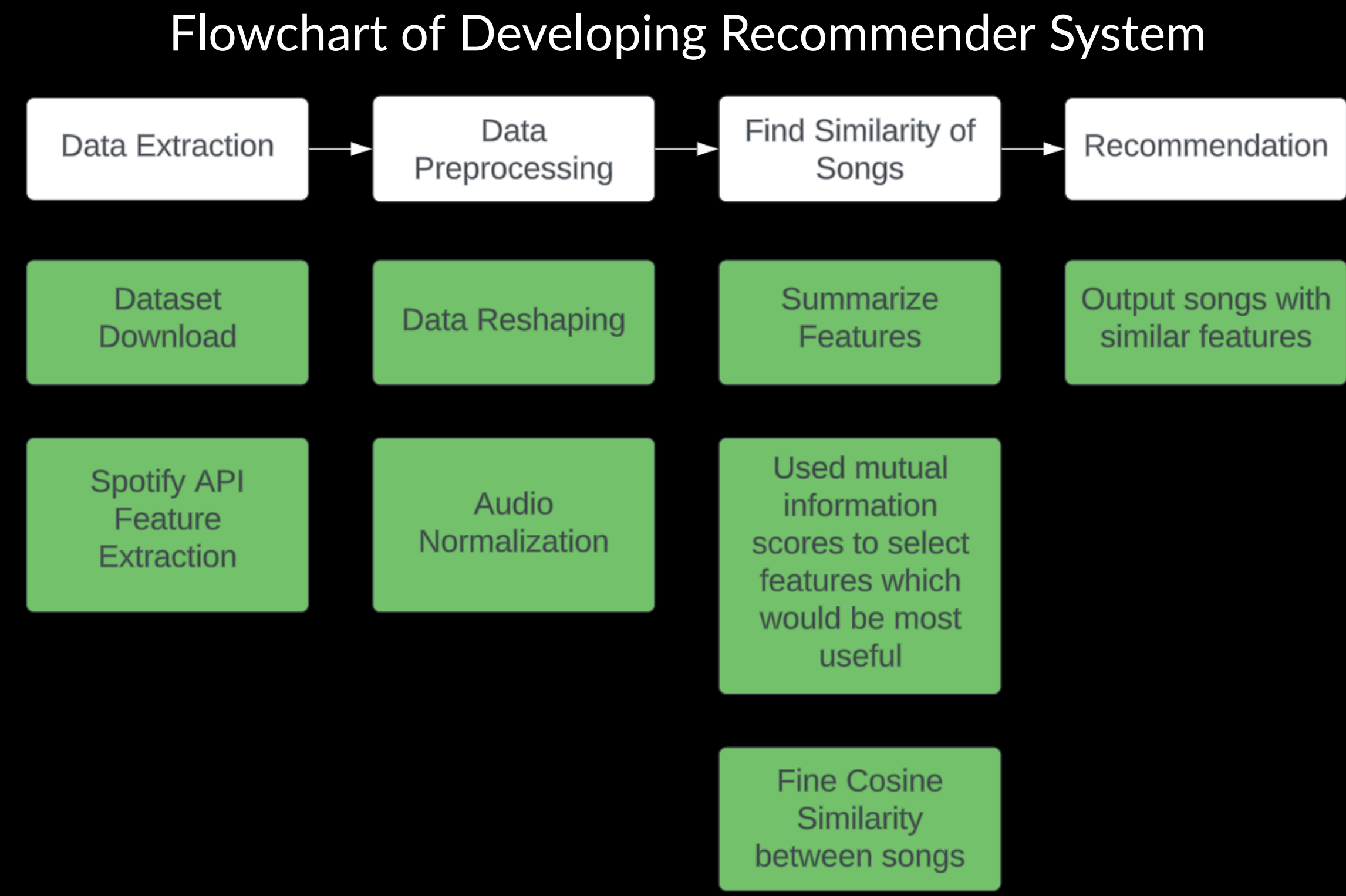
Our goal was to see if we can apply statistics to develop a Spotify Recommender System.

Did it work?



Read our full report!

Flowchart of Methods



Recommendations

Here are five song track recommendations for your RapCaviar playlist:

| | track_uri | track_name | track_artist | genre |
|---|--------------------------------------|----------------------|--------------|----------|
| 1 | spotify:track:4xxOaSrKexMciUUogZKvTS | 'Till I Collapse | Eminem | rap |
| 2 | spotify:track:3BEySnRKBFlo8O5ekZ619 | Leave Me Alone | Tech N9ne | rap |
| 3 | spotify:track:2prLJT67an2xDmyeKtCJiR | Money | DJ Khaled | rap |
| 4 | spotify:track:20F0Vgjn2v1TYcOASE0J7f | Always Picking On Me | S3RL | hardcore |
| 5 | spotify:track:7oSdf8HXNUiTkupaW5kgU | Same Never Changed | S3RL | hardcore |

Recommended songs for playlist 'RapCaviar'

Here are five song track recommendations for your Disco Forever playlist:

| | track_uri | track_name | track_artist | genre |
|---|--------------------------------------|---|--------------------|-------|
| 1 | spotify:track:0PWpenS4tZEHeOIS5Rt67L | System of Survival | Earth, Wind & Fire | funk |
| 2 | spotify:track:4WjunARS8Uoq76DkBk67Pe | Scheisstyp | Die Ärzte | rock |
| 3 | spotify:track:0T6oYSJ8kLPN7a02xpDRZ3 | I Don't Want to Be a Freak (But I Can't Help M... | Dynasty | disco |
| 4 | spotify:track:6dokyiv4HEy6WWxQQcOKA | Happy People | The Temptations | funk |
| 5 | spotify:track:3xgT4zrbMDEufmP7YZD2zQ | Where's the Party (Dub version) | Madonna | pop |

Recommended songs for playlist 'Disco Forever'

Here are five song track recommendations for your Top Shower Songs playlist:

| | track_uri | track_name | track_artist | genre |
|---|--------------------------------------|--|----------------|----------|
| 1 | spotify:track:1nAGuIZxZ6vb8XW0xiMqic | Papi | Jennifer Lopez | pop |
| 2 | spotify:track:3y9l6k1sTwXgJ3L80lfrS9 | Defeat You | Smash Mouth | rock |
| 3 | spotify:track:3ZxqRrKOSjBEZVZkBGjpWh | Mares de emocio | Elvis Crespo | merengue |
| 4 | spotify:track:4OzQg5lcAkBxQV6Awq2T0y | That Don't Impress Me Much (Dance Mix) | Shania Twain | pop |
| 5 | spotify:track:2yZhYOrX9ukmcyfljGYx9O | Bodrum | Hande Yener | pop |

Recommended songs for playlist 'Top Shower Songs'

Limitations

- Doesn't take into account lyrics or mood of the song.
- Limited data to top 10,000 artists in the US
- Sometimes recommends different versions of the same song
- Made too many requests to the API with same account in the given time frame

Conclusion

We were able to use Python and API to build a Spotify Recommender System based on Audio Features. Our recommender system received a rating of 4 or 5 in 66 percent of our team members.