

FINAL PROJECT PRESENTATION

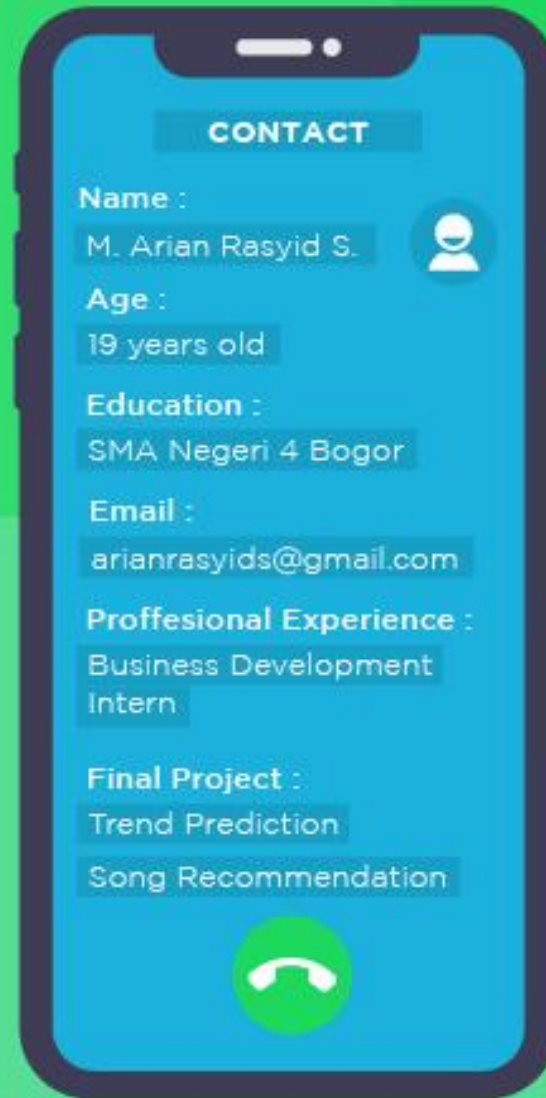
By :

**Muhammad Arian Rasyid Sidiq.
- JCDS 07.**

THE CONTENT:

1. Profile
2. Introduction
3. Identify the Problems
4. Provide Solution
5. Notebook Preview
6. Audify

1. PROFILE



CONTACT

Name :
M. Arian Rasyid S.


Age :
19 years old

Education :
SMA Negeri 4 Bogor

Email :
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Proffesional Experience :
Business Development
Intern

Final Project :
Trend Prediction
Song Recommendation





2. INTRODUCTION





Spotify Technology S.A.

**42-44, Avenue de la Gare
L-1610 Luxembourg
Grand Duchy of Luxembourg**

Spotify Technology S.A.

is an international media services provider of Swedish origin. It is legally domiciled in Luxembourg and is headquartered in Stockholm, Sweden. Founded in 2006, the company's primary business is providing an **audio streaming platform**, the "Spotify" platform, that provides DRM-protected music, videos and podcasts from record labels and media companies. As a **freemium service**, basic features are free with **advertisements** or automatic music videos, while additional features, such as offline listening and commercial-free listening, are offered via paid subscriptions.



Business Model

1. Premium Service

Our Premium Service provides Premium Subscribers with unlimited online and offline high-quality streaming access to our catalog of music and podcasts. In addition to accessing our catalog on computers, tablets, and mobile devices, users can connect through speakers, receivers, televisions, cars, game consoles, and smart watches. The Premium Service offers a music listening experience without commercial breaks.

2. Ad-Supported Service

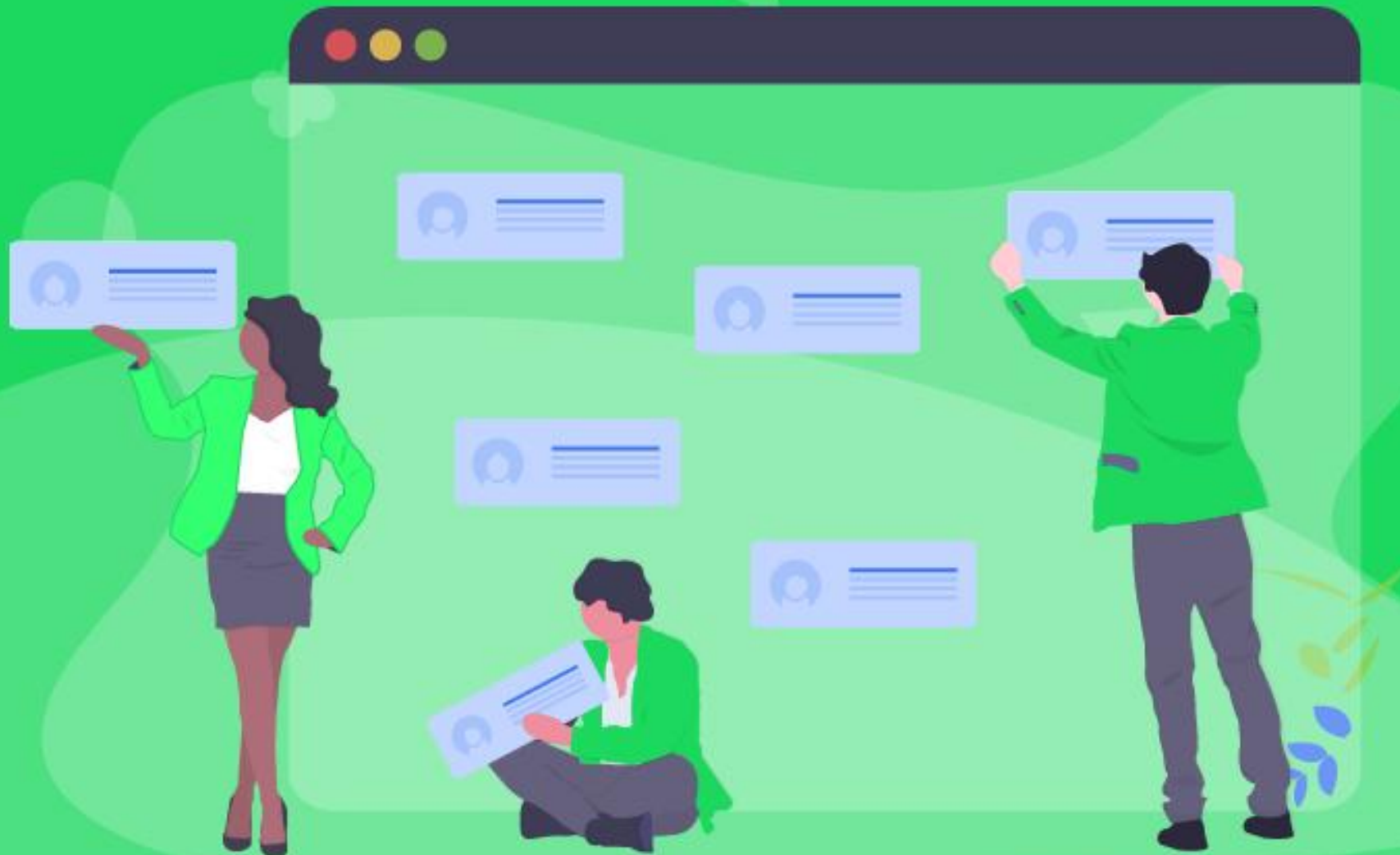
Our Ad-Supported Service has no subscription fees and generally provides Ad-Supported Users with limited on-demand online access to our catalog of music and unlimited online access to our catalog of podcasts on their computers, tablets, and compatible mobile devices. We generate revenue for our Ad-Supported segment from the sale of display, audio, and video advertising delivered through advertising impressions across our music and podcast content.

Source :

- Spotify Annual Report 2019



3. IDENTIFY THE PROBLEMS



External : Competitors



Podcasts

 **MUSIC**


Google Podcasts



Internal :

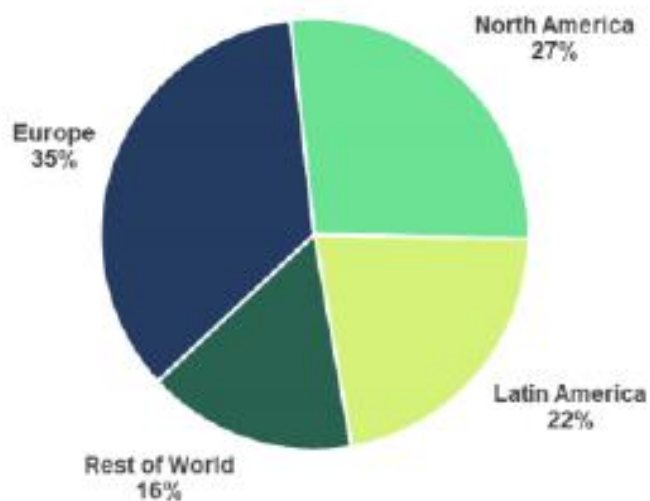
Users by Country

Revenue by country

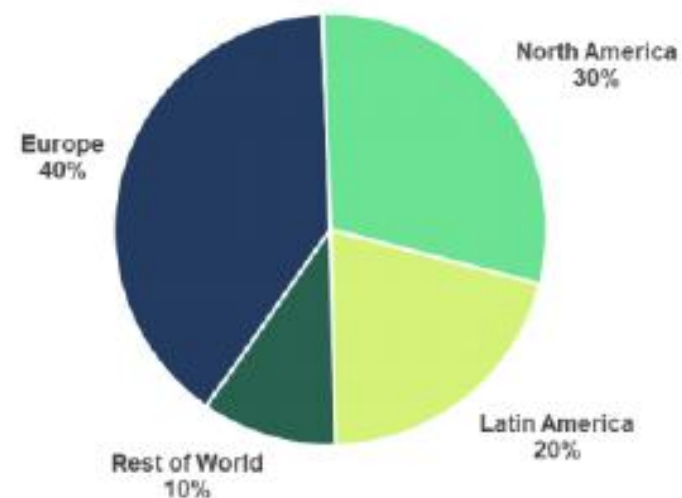
	2019	2018	2017
	(in € millions)		
United States	2,542	1,973	1,577
United Kingdom	727	576	444
Luxembourg	4	3	3
Other countries	3,491	2,707	2,066
	6,764	5,259	4,090



Total MAUs by Region



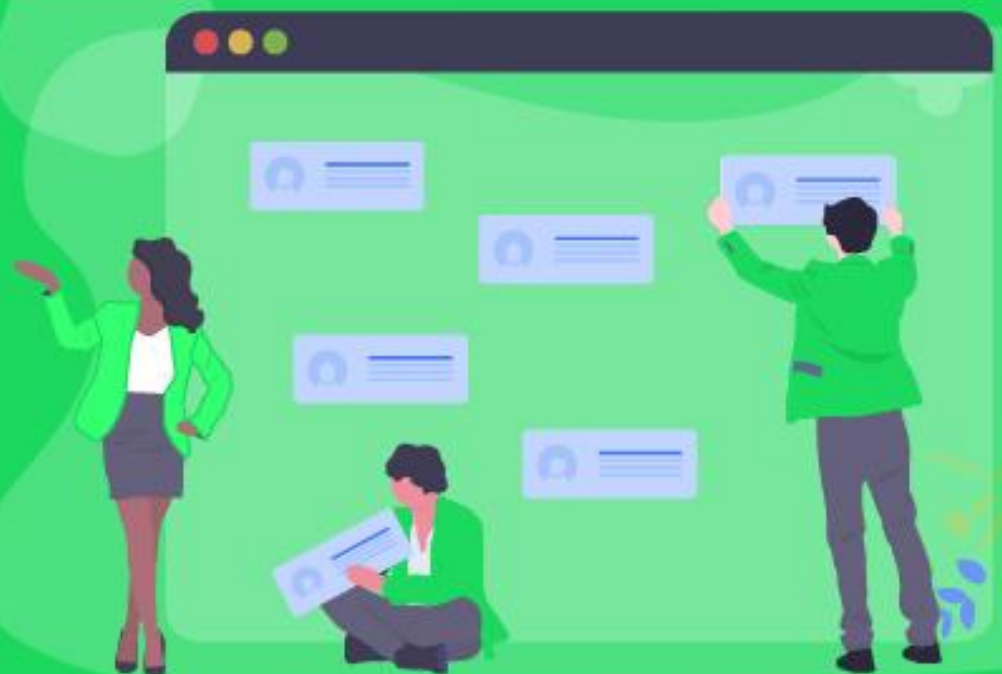
Subscribers by Region



Summary User and Financial

SUMMARY USER AND FINANCIAL METRICS

USERS (M)	Q4 2018	Q3 2019	Q4 2019
Total Monthly Active Users ("MAUs")	207	248	271
Premium Subscribers	96	113	124
Ad-Supported MAUs	116	141	153
FINANCIALS (€M)			
Premium	1,320	1,561	1,638
Ad-Supported	175	170	217
Total Revenue	1,495	1,731	1,855



Highlighted Strategy

Recent highlights of positive developments with our marketplace strategy include:

- **Spotify for Artists:** Launched the year-end "Artist Wrapped" campaign to drive engagement among existing Spotify for Artists users and acquire new ones. Artist Wrapped is the industry version of our consumer 2019 Wrapped campaign. It is a tailor-made experience for artist teams that summarizes the highlights of their year on Spotify and how listeners engaged with their work. There are now over 500,000 monthly active artists and creators on Spotify for Artists, and we expect the platform to be the main entry point for most of our paid creator tools.

Spotify Technology S.A.

42-44 avenue de la Gare, LU-1610 Luxembourg

Source :

- Spotify Press Release Q4 2019 (Shareholder Letter)
- Spotify Annual Report 2019

Conclusion

1. Kompetitor

Seiring terus meningkatnya industri streaming audio, **semakin banyak juga kompetitor** besar.

2. Potensial Market

Wilayah di luar eropa, amerika latin dan amerika utara menjadi **market yang sangat potensial**.

3. Pertumbuhan terhadap pendapatan

Pertumbuhan MAUs dengan Premium Subscribers pada Q3 sampai dengan Q4 2019 **berbanding terbalik** dengan pertumbuhan pendapatan yang didapat pada Q3 hingga Q4 2019.

4. Strategi

Strategi yang dikembangkan oleh Spotify adalah "spotify for artists" untuk menjadi **tools utama** bagi para artist dan creator.



4. PROVIDE SOLUTION



Solution

1. Kompetitor

Mengembangkan “Unique Value”, salah satunya adalah **rekomendasi**.

2. Potensial Market

Menganalisis karakter seperti apa yang disukai oleh negara tersebut.

3. Strategi

Mendukung para creator dan artist dengan memberikan insight tentang **prediksi dari audio features**.



5. NOTEBOOK PREVIEW



5.1. DATASET :

- 5.1.1 SPOTIFY API DATASET

Source :

<https://developer.spotify.com/>

- 5.1.2 KAGGLE DATASET

Source :

<https://www.kaggle.com/zaheenhamidani/ultimate-spotify-tracks-db>



5.1.1 SPOTIFY API DATASET

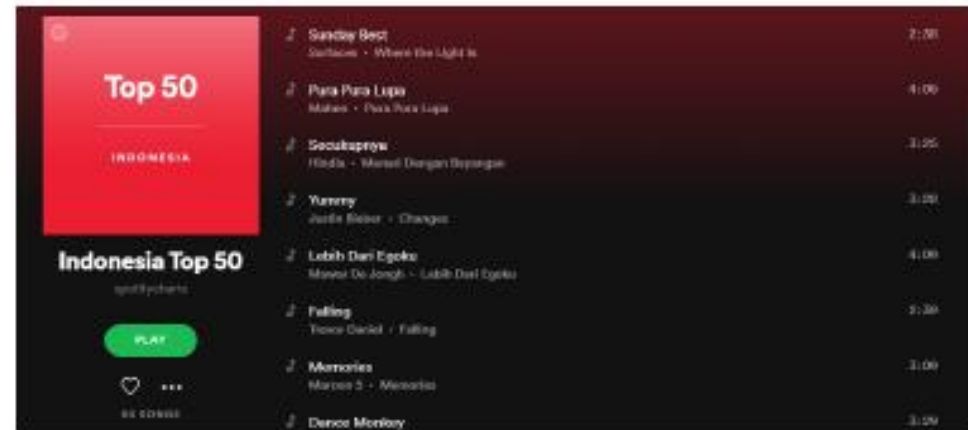
The Data Properties

1. **Genre** : The genre of the track
2. **Artist Name** : The name of artist
3. **Track Name** : The Name of the track
4. **Track Id** : ID of the track on spotify
5. **Popularity** : The higher the value, the more popular the song is
6. **Acousticness** : The higher the value, the more acoustic the song is
7. **Danceability** : The higher the value, the easier it is to dance to this song
8. **Duration** : The length of the song in milliseconds
9. **Energy** : The energy of a song - The higher the value, the more energetic the song is
10. **Instrumentalness** : Represents the amount of vocals in the song. The higher the value, the more instrumental the song is.
11. **Key** : The estimated overall key of the track.
12. **Liveness** : Describes the probability that the song was recorded with a live audience. The higher the value, the more likely the song is a live recording
13. **Loudness** : The higher the value, the louder the song is.
14. **Mode** : The mode of the track. Either major or minor
15. **Speechiness** : The higher the value, the more spoken word the song contains.
16. **Tempo** : The overall estimated tempo of a track in Beats Per Minute (BPM)
17. **Time Signature** : An estimated overall time signature of a track. The time signature (meter) is a notational convention to specify how many beats are in each bar (or measure)
18. **Valence** : The higher the value, the more positive mood for the song.
19. **Type** : The object type: "audio_features"
20. **Uri** : The Spotify URI for the track.



5.2.1 SPOTIFY API ANALYSIS

Playlist IDN



The screenshot shows the Spotify 'Indonesia Top 50' playlist. On the left, a red square contains the text 'Top 50' and 'INDONESIA'. Below this, it says 'Indonesia Top 50' and 'spotifycharts'. There is a green 'PLAY' button, a heart icon, and a share icon. On the right, a list of songs is displayed with their rank, name, artist, and duration.

Rank	Song	Artist	Duration
1	Sanding Best	Surfswam - Where the Light is	2:30
2	Pura Pura Lupa	Maher - Pura Pura Lupa	4:00
3	Seoulapnya	Hadia - Menari Dengan Bepeng	3:25
4	Yummy	Juice WRLD - Changes	3:00
5	Lubis Dari Egois	Manus De Jongh - Lubis Dari Egois	4:00
6	Falling	Tyler Lora - Falling	3:30
7	Memories	Maroon 5 - Memories	3:00
8	Dance Monkey		3:29

Playlist USA

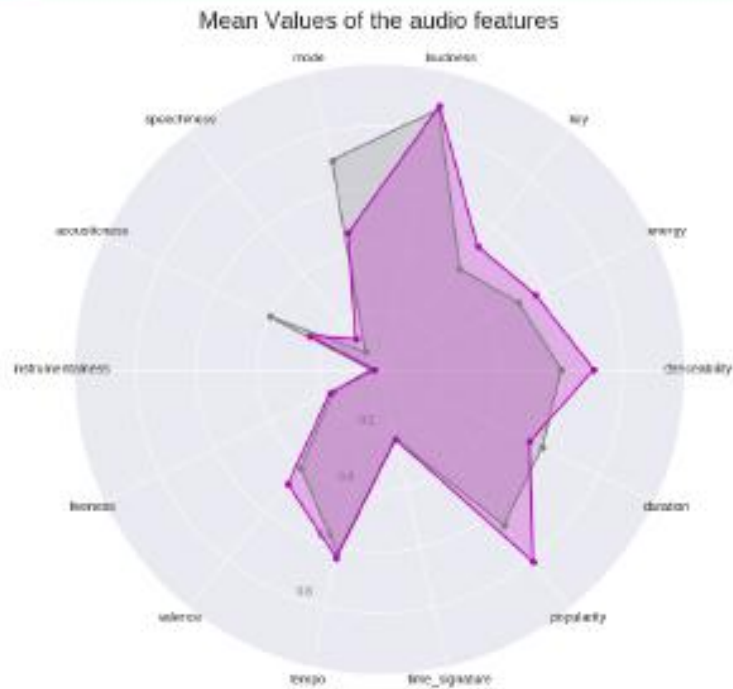
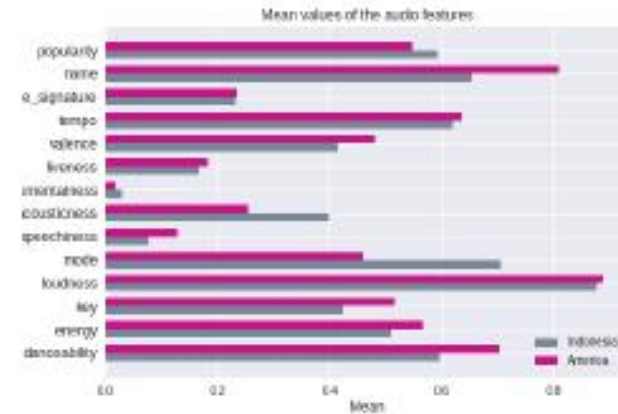


The screenshot shows the Spotify 'United States Top 50' playlist. On the left, a red square contains the text 'Top 50' and 'USA'. Below this, it says 'United States Top 50' and 'spotifycharts'. There is a green 'PLAY' button, a heart icon, and a share icon. On the right, a list of songs is displayed with their rank, name, artist, and duration.

Rank	Song	Artist	Duration
1	The Box	Drake - Please Excuse Me For Being Antisocial	3:58
2	Blinding Lights	The Weeknd - Blinding Lights	3:23
3	La Dilla	Red Doney - THE GMDL	2:43
4	Si Voo a Tu Mero	Red Doney - THE GMDL	3:50
5	Say So	Doja Cat - Hot Pink	3:37
6	Intentions (feat. Quavo)	Juice WRLD, Quavo - Changes	3:32
7	Life Is Good (feat. Drake)	Future, Drake - Life Is Good (feat. Drake)	3:57
8	Stupid Love		3:13



5.3.1 SPOTIFY API RESULT



5.1.2 KAGGLE DATASET

Dataset contains 232725 rows and 18 columns

	genre	artist_name	track_name	track_id	popularity	acousticness	danceability	duration_ms	energy	instrumentalness	key	liveness	loudness	mode	speechiness	tempo	time_signature	valence
0	Movie	Henri Salvador	C'est beau de faire un show	06Rj08gas8KCKjDoeI'gVV	0	0.611	0.388	89373	0.910	0.000	C#	0.3450	-1.828	Major	0.0525	106.909	4-Apr	0.814
1	Movie	Martin & les fées	Perdu d'avance (par Gad Elmaleh)	05jCINbCOOssyehmHedP	1	0.246	0.590	137373	0.737	0.000	F#	0.1510	-5.559	Minor	0.0060	174.003	4-Apr	0.816
2	Movie	Joseph Williams	Don't Let Me Be Lonely Tonight	0CoSDoolNKKRa124s9uTVy	3	0.952	0.683	170267	0.131	0.000	C	0.1030	-13.879	Minor	0.0362	99.488	4-May	0.368
3	Movie	Henri Salvador	Dis-moi Monsieur Gordon Cooper	0Gz6Tvm52BwZD07G8Hf	0	0.703	0.240	152427	0.328	0.000	C#	0.0985	-12.178	Major	0.0305	171.758	4-Apr	0.227
4	Movie	Fabien Falaf	Overture	0ludXpMR0hdEPvSIITCK	4	0.858	0.331	62625	0.225	0.123	F	0.2020	-21.150	Major	0.0456	148.576	4-Apr	0.390

The Data Properties

1. **Genre** : The genre of the track
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3. **Track Name** : The Name of the track
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18. **Valence** : The higher the value, the more positive mood for the song.



5.2.2 KAGGLE ANALYSIS

Mood Recommendation

```
[ ] 1 def mood_recommendations(track_name, cosine_sim=cosine_sim):  
2     idx = indices[track_name]  
3     sim_scores = list(enumerate(cosine_sim[idx]))  
4     sim_scores = sorted(sim_scores, key=lambda x: x[1], reverse=True)  
5     sim_scores = sim_scores[1:11]  
6     song_indices = [i[0] for i in sim_scores]  
7     return pd.DataFrame(df[['artist_name', 'track_name', 'track_id', 'popularity', 'mood']].iloc[song_indices])
```

Popularity Prediction



	Model	Accuracy
0	LogisticRegression	0.701038
1	K-NearestNeighbors	0.710860
2	DesicionTreeClassifier	0.752369
3	RandomForestClassifier	0.794500



5.3.2 KAGGLE RESULT

Popularity Prediction

```
1 130127
0 102598
Name: result, dtype: int64
```

Mood Recommendation

```
[33]: mood_recommendations("Echoes", cosine_sim)
```

	artist_name	track_name	track_id	popularity	mood
3008	Del Reeves	The Girl On The Billboard	3T4zow8lal809ciFETZ6wM	39	Chill
3010	David Nail	I'm A Fire	4TJYWMST1z5aOq5lbcc9xU	34	Chill
3012	Johnny Cash	Oney	2p9cD6MdK6vZk]7GhXJCZj	40	Chill
3013	Clay Walker	I Can't Sleep - 2014 Version	4wGKVFDaFalkdmKqgKERuK	38	Chill
3014	Maren Morris	I Wish I Was (Live from SXSW 2016)	0LxN6gtl8oVH4tTtTutvXG	36	Chill
3016	Ryan Bingham	Sunshine	41J9mkbAwGq9LAJdeJuyC3	39	Chill
3024	Big & Rich	Smoke in Her Eyes	3nfBYdyvXlwccIBLFSGHt	38	Chill
3026	Blake Shelton	I'll Just Hold On	4ZTVWCfZewoOYhhIElraIT	36	Chill
3028	Carrie Underwood	You Won't Find This	6iFLZxvkPxvnFtp89R42Vp	40	Chill
3029	Alan Jackson	Turn Your Eyes Upon Jesus	0LkK4ePBHSZ86glwMYgYbO	39	Chill



6. AUDIFY



“Audio Insight from Spotify”



The background is a solid green color. It features several light green geometric shapes: circles, a triangle, and a cross, scattered across the upper half. A large, light green curved shape, resembling a hill or a wave, spans the bottom half of the image.

THANK YOU!

GITHUB :
https://github.com/arianrasyidd/Final_Project