# Introduction
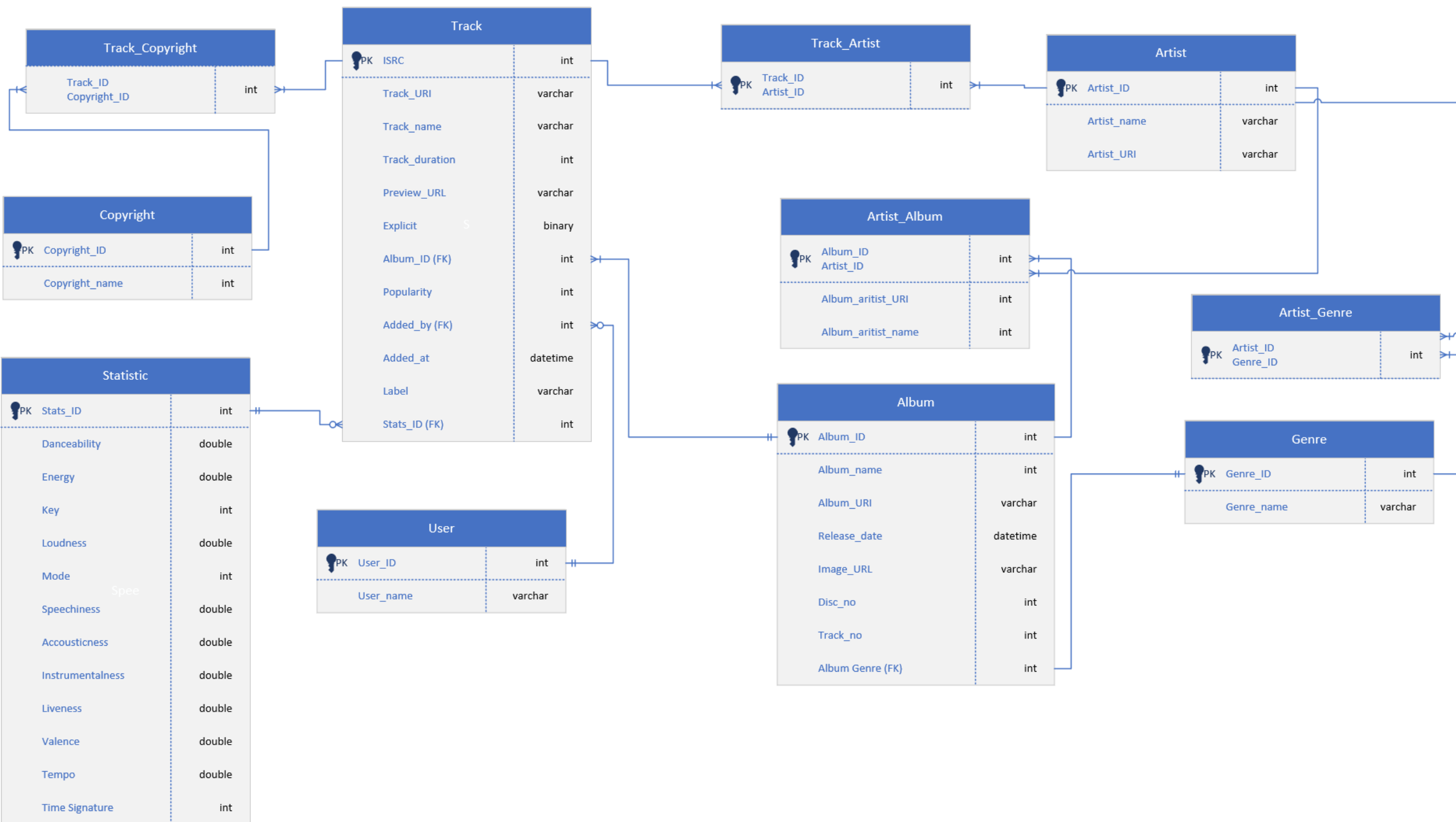
**Relatively clean dataset retrieved via Kaggle**

**30+ columns allowed us to make over 7 tables and connections**

**2000+ rows of Data**

# Why is this interesting to us?

- *Musical Evolution Over Time:* Analyzing the top songs over several decades can provide insights into how music styles, genres, and preferences have evolved.

- *Cultural Reflection:* Music often reflects the cultural and social environment of its time. Studying the top songs can give a snapshot of the prevailing sentiments, values, and themes in different eras.

- *Impact of Technology:* As the dataset spans several decades, it provides an opportunity to explore the impact of technological advancements on the music industry. For instance, the influence of digital streaming platforms like Spotify on music consumption.

- *Artist and Genre Exploration:* Analyzing the top songs allows for an in-depth look at the most successful artists and genres over time. It can be interesting to see which artists or genres dominated specific periods.

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# Our Analysis…

**Query 1: What's the top 5 popular tracks in the database?**

**SELECT** track_name, track_uri, popularity
**FROM** track
**ORDER BY** popularity **desc**
**LIMIT 5;**

3/5 Top 5 songs are by Rock Bands

| track_name | track_uri | popularity |
|---|---|---|
| Here Without You | spotify:track:3NLrRZoMF0Lx6zTlYqeIo4 | 80 |
| Dont Stop - 2004 Remaster | spotify:track:4bEb3KE4mSKlTFjtWJQBqO | 79 |
| Eastside (with Halsey & Khalid) | spotify:track:0d2iYfpKoM0QCKvcLCkBao | 78 |
| Juke Box Hero | spotify:track:00qOE7OjRl0BpYiCiweZB2 | 74 |
| Its Like That | spotify:track:0CtkjgZpkgnW7U6WmHsakD | 68 |

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# Query 2: Who are the top 5 popular artists in the database?

**SELECT** popularity, Track_artist.Artist_URI, artist.Artist_Name
**FROM** track
**INNER JOIN** Track_artist **ON** track.Track_URI =
Track_artist.Track_URI
**INNER JOIN** artist **ON** Track_artist.Artist_URI = artist.Artist_URI
**ORDER BY** popularity **desc**
**LIMIT 5;**

| popularity | Artist_URI | Artist_Name |
|---|---|---|
| 80 | spotify:artist:2RTUTCvo6onsAnheUk3aL9 | 3 Doors Down |
| 79 | spotify:artist:08GQAI4eElDnROBrJRGE0X | Fleetwood Mac |
| 78 | spotify:artist:5CiGnKThu5ctn9pBxv7DGa | benny blanco, Halsey, Khalid |
| 74 | spotify:artist:6IRouO5mvvfcyxtPDKMYFN | Foreigner |
| 64 | spotify:artist:0TnOYISbd1XYRBk9myaseg | Pitbull |

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# Query 3: How did the popularity of the songs whose danceability, energy, and liveness are above average, compare to the most popular songs?

```sql
SELECT
        t.track_name, t.popularity
FROM
        statistic s
JOIN
        track t ON s.stats_id = t.stats_id
CROSS JOIN
        (SELECT
                AVG(danceability) AS avg_danceability,
                AVG(energy) AS avg_energy,
                AVG(liveness) AS avg_liveness
        FROM  statistic) avg
WHERE
        s.danceability > avg.avg_danceability  AND
        s.energy > avg.avg_energy   AND
        s.liveness > avg.avg_liveness;
```

| track_name | popularity |
|---|---|
| Justified & Ancient - Stand by the Jams | 0 |

# Query 4: Are songs whose duration is longer than 3 min. more popular than songs whose duration is less?

```
SELECT
        CASE (
        WHEN track.track_duration/60000 > 3 THEN 'more than 3 minutes'
        WHEN track.track_duration/60000 < 3 THEN 'less than 3 minutes'
        ELSE '3 minutes'
END) AS track_duration_category,
AVG(popularity) AS average_popularity
FROM track
GROUP BY track_duration_category;
```

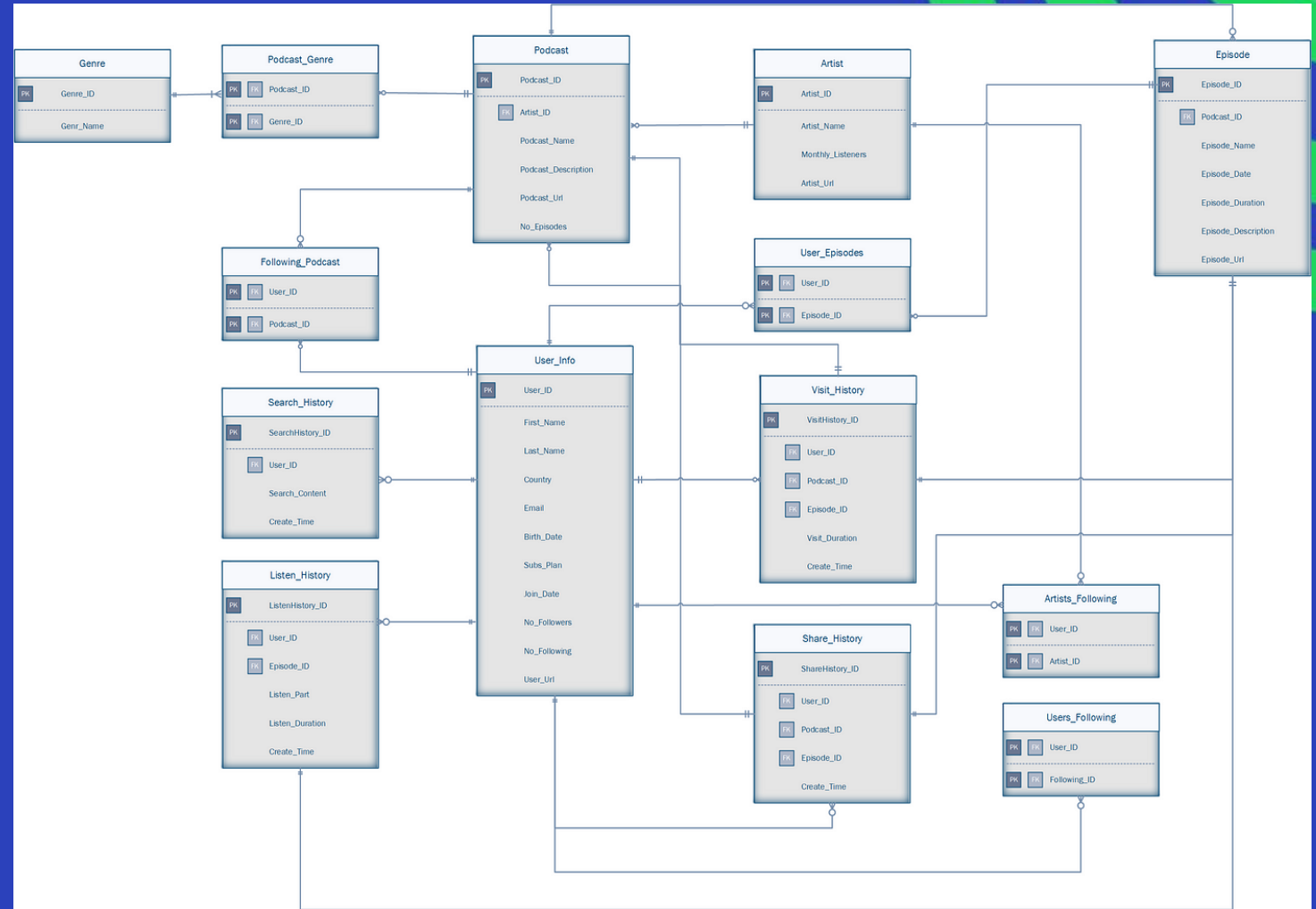| track_duration_category | average_popularity |
|---|---|
| more than 3 minutes | 47.6364 |
| less than 3 minutes | 78.0000 |

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# Query 5: Which labels produced the least popular tracks and what were the track names?

**SELECT**

　　　label, max(popularity), track_name

**FROM**

　　　track group by label, track_name

**ORDER BY** max(popularity)

**LIMIT** 5;

| label | max(popularity) | track_name |
|---|---|---|
| Jams Communications | 0 | Justified & Ancient - Stand by the Jams |
| Universal Music Group | 0 | Mercy |
| Universal Music Group | 0 | You Cant Always Get What You Want |
| Sanctuary Records | 42 | Apeman - 2014 Remastered Version |
| Jive | 56 | From the Bottom of My Broken Heart |

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# Overall goal?

- The use of data analytics and data management supports artists by providing valuable insights into audience demographics, listening habits, playlist placements, and much more.

- Spotify also provides similar support for customers by providing recommendations and storing data to improve the customer experience.