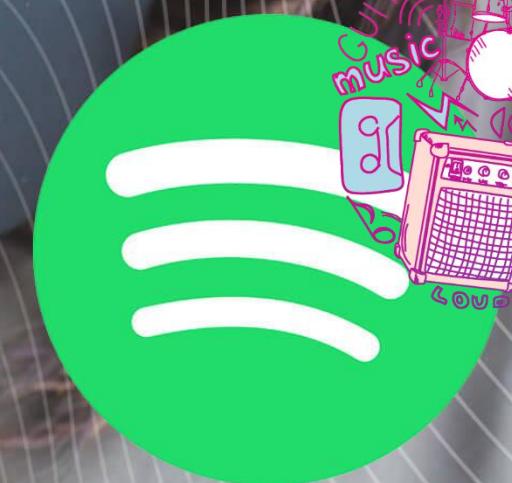




Spotify

Data SQL Analysis



Introduction



- Why analyze music data?
- Growing demand for streaming insights
- Role of data in artist/album success
- Importance for labels & platforms



Project Overview



SQL analysis of Spotify dataset



Covers tracks, albums & artists



Includes audience engagement metrics



Solves real-world business questions

Key Questions



Which artists/albums dominate streams?



How do official videos impact views?



Which tracks crossed 1B+ streams?



Spotify vs YouTube performance

Dataset Used



- Stored in PostgreSQL table: **spotify**
- Fields: artist, track, album, streams
- Audio features: energy, danceability, tempo
- Audience metrics: views, likes, comments

Schema Highlights



Artist, Track, Album details

Danceability, Energy, Liveness



Licensed & Official Video status

Streams, Views, Likes, Comments

Project Objectives



Identify tracks with 1B+ streams



Evaluate Spotify vs YouTube reach



Compare tracks per artist & album

Analyze audio features & engagement

Business Problems



Who are top artists & albums?



Avg. danceability per album?



Do official videos boost popularity?

Top 3 most-viewed tracks per artist?

Methodology

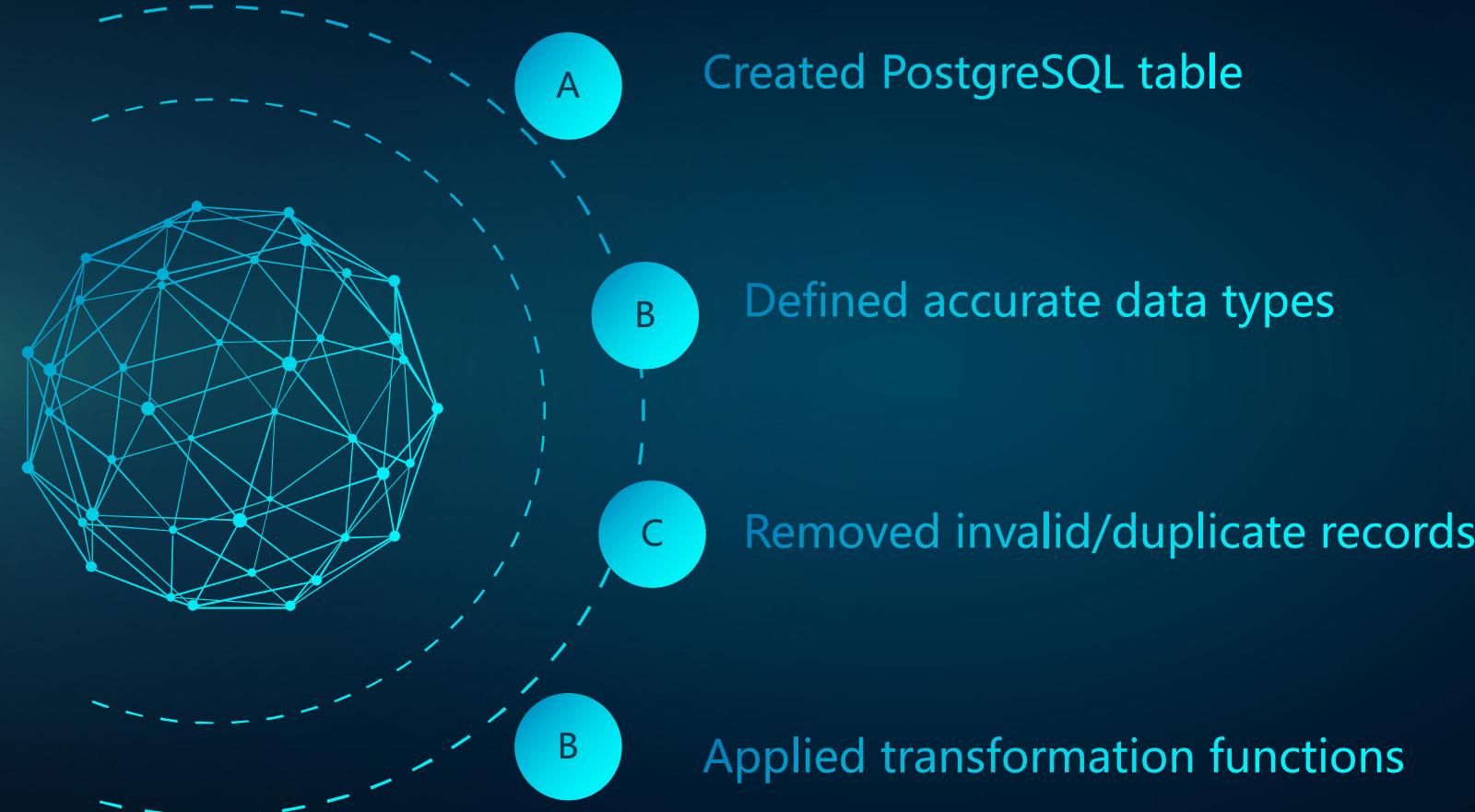


- Data Preparation & Cleaning
- Basic SQL Exploration



- Advanced SQL Queries
- Insights & Visualization Ideas

Data Preparation



SQL Exploration



- Basic queries: COUNT, DISTINCT, WHERE
- Filters on streams & album type
- Simple aggregations: SUM, AVG
- First-level descriptive insights



Advanced Analysis



Aggregates with GROUP BY, HAVING

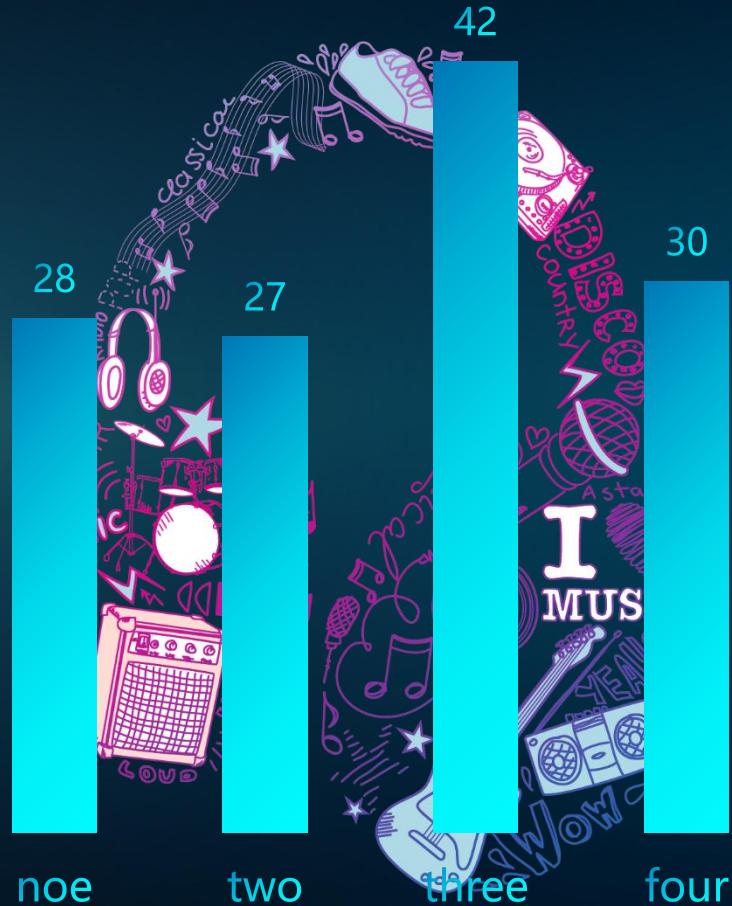
Conditional logic: CASE, COALESCE

Subqueries & CTEs for insights



Window functions for ranking

Key Insights



- ✓ Songs with 1B+ streams identified
- ✓ Top artists with max tracks
- ✓ Albums with high danceability
- ✓ Engagement trends per album
- ✓ Energy ranking of tracks
- ✓ Spotify vs YouTube comparison
- ✓ Liveness above average detected
- ✓ Impact of official videos



Visualization Idea



Extend insights with BI tools

- Power BI Dashboards
 - Tableau Visuals 
 - Artist/Industry Presentations
 - YouTube vs Spotify comparison
- 

Sample Queries



Basic Queries

- Tracks with >1B streams
- Licensed tracks & total comments
- Count of tracks per artist
- Albums with their tracks



Advanced Queries

- Avg. danceability per album
- Top 5 high-energy tracks
- Liveness > average
- Energy range per album



Skills Gained



- SQL & PostgreSQL expertise
- Data cleaning with queries
- Subqueries, Window Functions
- Business-focused analytics generation



Conclusion



SQL → Actionable
Music Analytics

- Artist, album, track performance
- Industry-relevant analytics
- Extendable to BI dashboards





Thank You!

Every great presentation is complete with
a great audience — and that's you!

