

# Spotify Listening History Analysis Using Power BI

## Introduction

The purpose of this project is to explore and visualize personal Spotify listening history using Power BI. This analysis helps in understanding music listening behavior, patterns, and trends over time using interactive dashboards and visuals.

## Tools Used

- Power BI Desktop
- Microsoft Excel / CSV
- DAX (Data Analysis Expressions)
- Power Query Editor
- Spotify Listening Data

## Dataset Overview

- File Used: spotify\_history.csv
- Total Rows: 22,000+ entries
- Key Columns:
  - endTime - Timestamp
  - artistName - Artist
  - trackName - Song Title
  - msPlayed - Duration in ms

## Data Cleaning and Transformation (Power Query)

- Converted msPlayed to minutes
- Extracted date, month, year, hour from endTime
- Removed incomplete records
- Standardized column names

## Calculated Measures (DAX)

- Total Listening Time (Hours)

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- Average Session Duration
- Top Artist by Play Time
- Tracks Played Per Day
- Most Active Hour

## Dashboard Features and Visualizations

1. Listening Time Overview
2. Top Artists & Tracks
3. Listening Trends Over Time
4. Hourly Heatmap
5. Track Popularity
6. Filters for user interaction

## Key Insights

- Peak listening: 6 PM to 10 PM
- Top 5 artists = 40% listening time
- Weekends more active than weekdays
- Morning sessions shorter

## Conclusion

This Power BI report transforms raw Spotify data into meaningful insights. It offers a comprehensive view of music habits and enables trend discovery.

Future Improvements:

- Genre-based analysis
- Sentiment analysis of lyrics
- Multi-user comparisons