Produce that Beat

PRESENTATION BY:

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Meet the Team

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Executive Summary

About Us

Produce that Beat (“the Label”) is an innovative record label poised to revolutionize and disrupt the music industry. By combining data analytics with a deep understanding of music trends, the Label believes it can establish itself as an industry leader and pave way to a new era of talent discovery and music production

Approach for Success

Artist Discovery	• Streamline talent acquisition • Discover up-and-coming artists • Foster environment of creativity
Music Production	• Analyze popular songs • Predict musical preferences • Top music charts

Most Streamed Spotify Songs 2023

The Spotify data set was sourced from Kaggle.com and is a comprehensive list of the most popular songs of 2023 as determined by the Spotify music streaming platform

24 **Variables**

953 **Observations**

22,872 **Data Points**

Key Attributes

- Song Title and Artist Name
- Song Release Date
- **Total Streams**
- Playlist and Chart Count per Platform
- **Beats per Minute**
- Danceability
- Valence
- **Energy**
- **Acousticness**
- Instrumentalness
- Liveness
- **Speechiness**

Note: Bolded variables where focus variables of the Label's analysis
Note: Variable definitions can be found in the written report
Link: Most Streamed Spotify Songs 2023

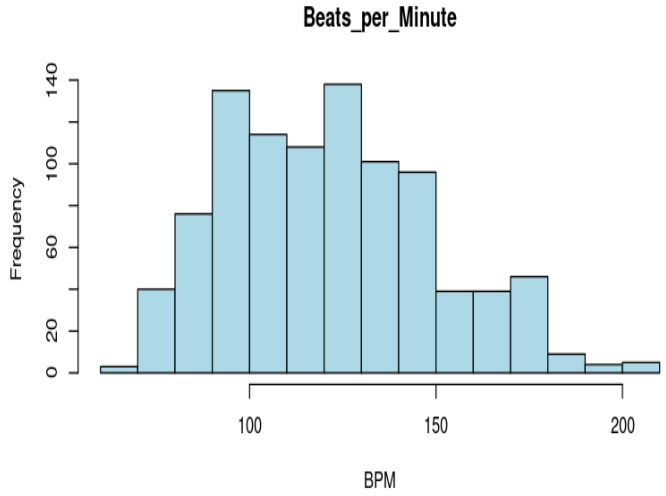
Distribution of Focus Variables

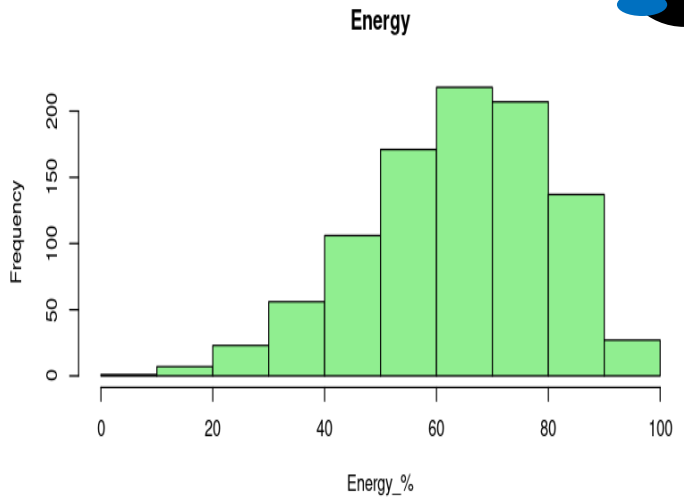
Beats per Minute measures the tempo, or speed, of a song, and the histogram is normally distributed around the mean of 122.5 BPM

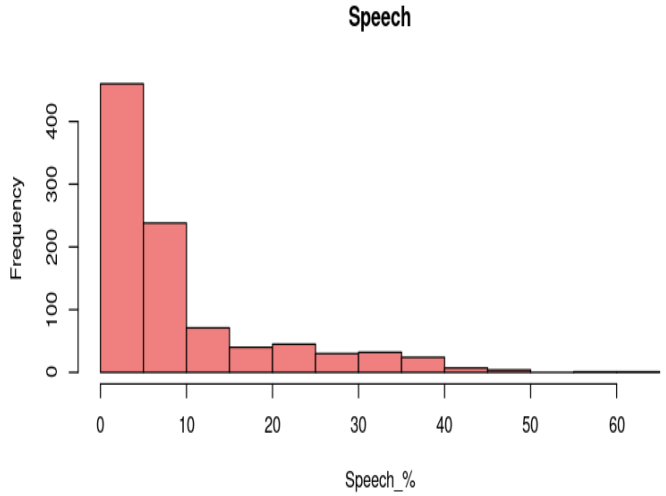
Energy refers to the perceived energy level of a song and is both normally distibuted around the mean and slightly left skewed, meaning most songs are on the higher Energy level

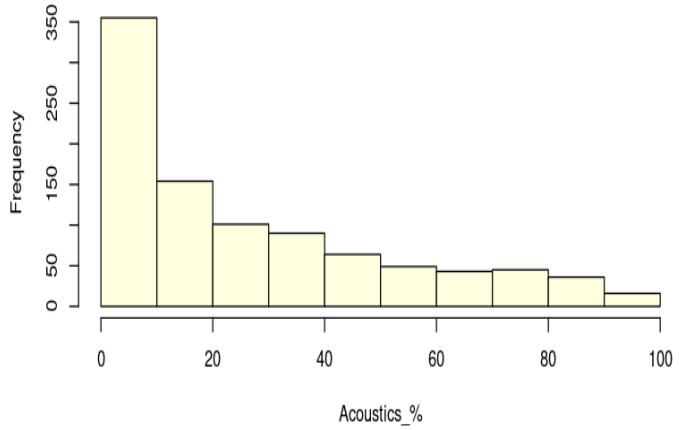
Speech is the number of spoken words within a song. This histogram indicates that 50% of songs have Speech levels of 10% or less. This shows that listeners prioritize the melodies over the amount of lyrics

Acoustic is the percentage of acoustic within a song. This histogram shows a consistent decline after 10%. This indicates that while acoustic music can still be popular, consumer preferences are clearly on the lower acoustic spectrum









Multi-Variable Linear Regression - Spotify Streams

95% **Confidence Level**

0.05 **Alpha Level**

	Regression Model 1	Regression Model 2	Regression Model 3	Regression Model 4
Variables	All key attributes	All key attributes and intercept set to 0	Focus variables and intercept set to 0	Focus variables, intercept set to 0, and log of total streams
Statistically Significant	✓	✓	✓	✓
Adjusted R^2	**2.1%**	**44.1%**	**44.1%**	**97.6%**

Prediction Equation: Total Streams = 2,088,653* BPM + 3,821,014 * Energy + 1,855,692* Acousticness – 5,089,073 * Speechiness

- Energy
- Speechiness
- Beats Per Minute
- Acousticness

Multi-Variable Linear Regression - Streaming Charts

Spotify

- Songs in top charts are similar to songs in Top Streams
- Energy
- Speechiness
- Beats Per Minute
- Acousticness

Apple

- Similar to Spotify
- Energy is a key driver of Apple Charts - even more than Spotify
- Speechiness is low
- Other metrics are not comparable

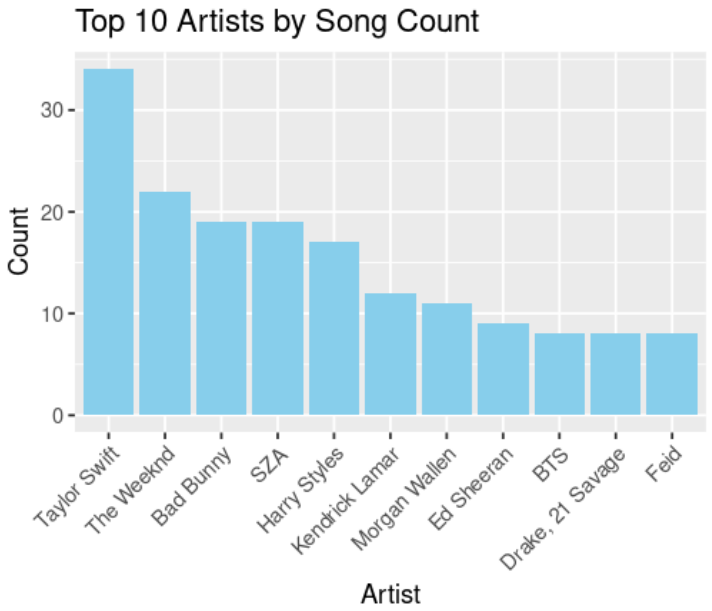
Deezer

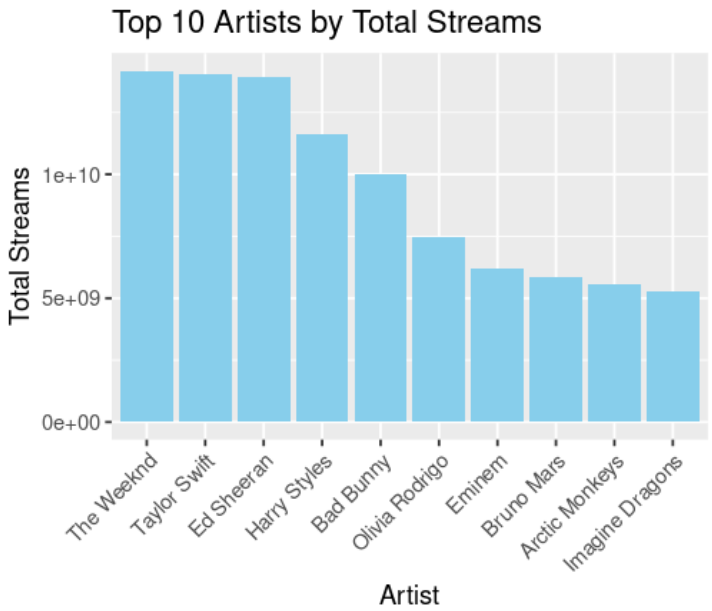
- Little comparison to Spotify
- Popular songs on Deezer are low on both Spotify and Apple
- Low Speechiness was the only significant metric

Based on the analysis, the Label predicts that Spotify top streaming and top charts will be similar. Apple will have a similar outcome to songs that are predicted to do well on Spotify. If the Label wants to focus on both services, energy is the most important consideration.

International hits on streaming services like Deezer will require additional research and may have different characteristics than popular US streaming services.

Multi-Variable Linear Regression - Streaming Charts

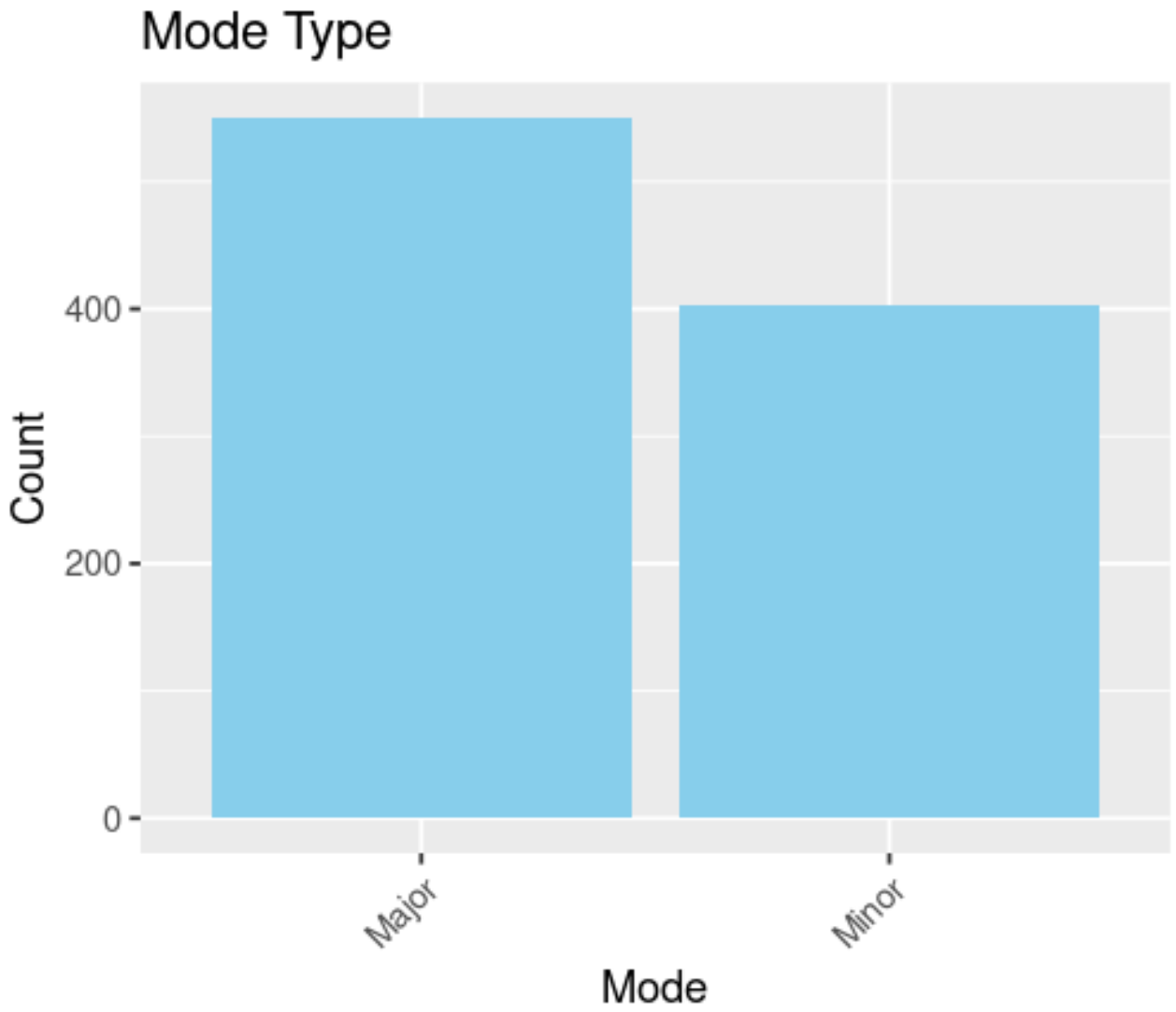




Taylor Swift is the artist with the greatest number of songs in the Spotify top 1,000 list. This can be explained by her sheer popularity, the promotion of the Eras world tour, and the recent love interest with NFL star Travis Kelce

Although Taylor Swift has the most tracks, The Weekend is the artist with the greatest number of streams surpassing Taylor by 132 million total streams. This is attributed to The Weekends most popular song, "Blinding Lights"

Both Taylor Swift and The Weekend are incredibly successful and although both considered pop artists, Taylor Swift is pure Pop while The Weekend is very R&B



Counts of Mode Type

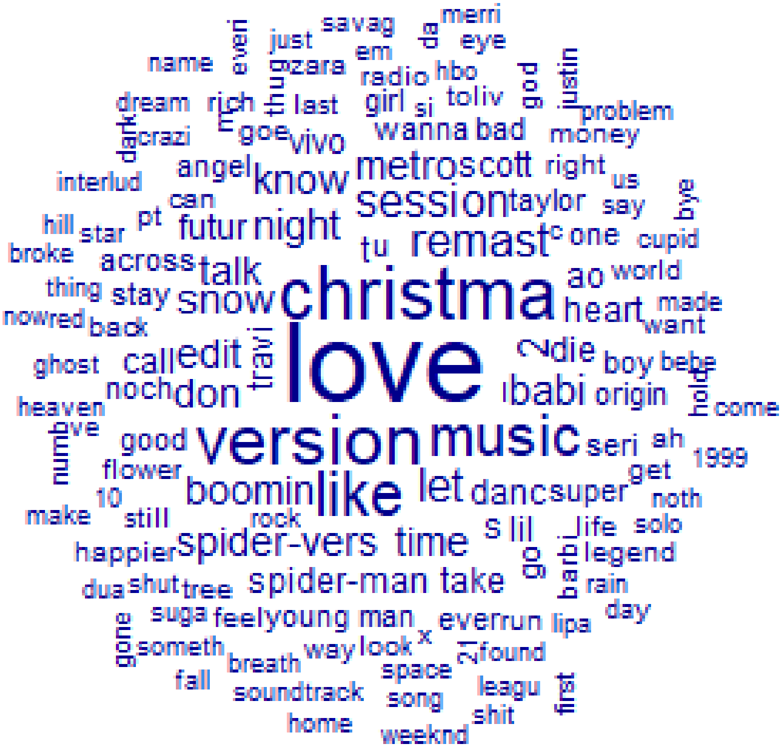
The Major mode is associated with bright, happy or triumphant sounds.

The Minor mode is associated with sadder or darker sounds. The choice between the two significantly influences the mood and emotional impact of the musical piece.

The Label found that most songs in the Spotify top 1,000 were in mode type Major

Text Mining: Word Cloud

Produce that Beat analyzed all song titles of the top 1,000 songs to determine if any key words were more popular than others. The team leveraged text mining to create a word cloud which enlarges the most frequently used words. From there, the team was able to pull a list of the top 10 words (excluding select words which can be found in the R script). This analysis was pivotal in progressing Produce that Beat' strategic agenda.



28	Love
17	Christmas
16	Version
14	Like
13	Music
10	Remastered
9	Session
9	Let
8	Night
8	Babi

Future Considerations

The Spotify dataset was instrumental in Produce that Beat's strategic decision-making process. Going forward, the Label will look to obtain additional data to increase the thoroughness of the analysis

Demographic Statistics

- Artists / streamers nationality and geographic data to understand impact of location on listener preferences and song / artist popularity
- Deezer is a France based streaming platform and user demographic statistics would offer additional insight into types of music being streamed
- High volume of Spanish songs

Playlist Insights

- All songs included in a singular playlist
- Gain insight into listener preferences and habits
- Support in predicting future trends using generative AI
- Allow the Label to better recommend new songs / artists

Genre

- Insight into listener preferences and variability of music and artist selection
- Support the Label in predicting user preferences based on past streams
- Allow the Label to better recommend new songs / artists

Recommendations & Conclusion

Recommendations

- Foster and encourage an environment of creativity
- Prioritize songs with the following metrics:
  - Energy: 70-85
  - Speechiness: 5-10
  - BPM: 120-130
  - Acousticness: 0-5
- Produce that Beat’s first ever Christmas album is set to be released on Dec 20
- The Labels next hot single is “Love Session” which is being released Jan 26th

Conclusion

The strategic integration of Spotify data analysis into Produce that Beat's operations marks a pivotal moment in the label's evolution. The two-fold strategy to identify emerging artists and produce chart-topping songs demonstrates a commitment to staying ahead of industry trends. This initiative positions Produce that Beat at the forefront of the music industry's transformation, redefining how record labels navigate the complexities of talent discovery and song production. Produce that Beat's commitment to innovation emphasizes its dedication to remaining a leader in the music industry. The Label's future success depends on the effective execution of this data strategy, aligning its operations with the dynamic preferences of audiences and propelling the Label into a new era of talent discovery and music excellence.