

Mapping the Rise: Streaming Success of Female Rappers by City

Problem

For decades, female rappers have faced barriers in the music industry, including limited radio play, industry bias, and underrepresentation in major playlists. However, in recent years, there has been a notable increase in the visibility and success of female rap artists.

This project focuses on analyzing which US cities have produced and supported the most successful female rappers, using data from different musical and editorial platforms. By mapping artist success back to their city of origin, the project highlights not only individual accomplishments but also the cultural and geographic ecosystems that help launch and sustain female rap careers.

The ultimate goal is to use these insights as the foundation for building a machine learning model that can predict future hits by female rappers, based on trends in city representation, streaming behavior, playlist inclusion, and historical performance metrics.

The key questions that need to be answered are: which U.S. cities produce the most successful female rappers? Who are the top-ranking female rappers in each of these cities based on streaming metrics and chart presence? What influence does geographic and cultural origin have on an artist's career trajectory? And ultimately, can we build a model to predict whether a female rap track is likely to become a future hit?

Data Sources

- **Billboard Hot 100 Songs:**
<https://www.kaggle.com/datasets/dhruvildave/billboard-the-hot-100-songs>
Provides historical chart performance of songs, allowing to analyze how female rappers have evolved over time in mainstream rankings.
- **Spotify Top 10k Streamed Songs:**
<https://www.kaggle.com/code/busetmkaya/spotify-top-10000-streamed-songs>
Helps in identifying the most streamed songs, enabling a comparison of the streaming success of female rappers versus male rappers.
- **Spotify Dataset (Popular Hip Hop Artists and Tracks):**
<https://www.kaggle.com/datasets/kanchana1990/spotify-datapopular-hip-hop-artists-and-tracks>
Provides data about artists and songs streaming, allowing to analyze the popularity of female rap artists compared to their male counterparts.
- **Tidal Playlist of Female Rappers:**
<https://tidal.com/browse/playlist/83ba3531-0c3b-4668-aae0-16009d925d62>
Features curated tracks from influential female rappers, offering a qualitative and quantitative look into their music styles and favorite themes.

- **Complex Article: Best Rap Cities Ranking:**
<https://www.complex.com/music/a/ecleen-luzmila/best-rap-cities-ranking>
Helps contextualize the geographic influence on the success of female rappers by mapping their origins to top ranked hip hop cities.

Project Scope

- Identify the most successful female rappers in each city.
- Investigate whether female-led rap songs have distinct musical specificities (e.g., tempo, energy) that contribute to their success.
- Map geographic influences by analyzing how hip hop cities contribute to the rise of female rappers.
- Explore playlist inclusion trends, evaluating how often female rappers are featured in prominent curated playlists and the impact of such placements on their visibility and success.
- Lay the groundwork for predictive modeling, using trends and features such as city, artist metadata, and historical streaming performance.

This project will result in ranking of female rappers by city, supported by streaming and chart data. It will offer a unique perspective on how local and regional music scenes contribute to the rise of influential women in hip hop.

It will also provide the foundation for a future model that aims to predict which female rap songs or artists are most likely to succeed, using regional and historical trends and streaming metrics.