

AFROBEATS RECOMMENDATION SYSTEM



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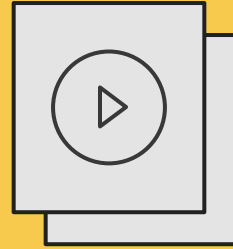
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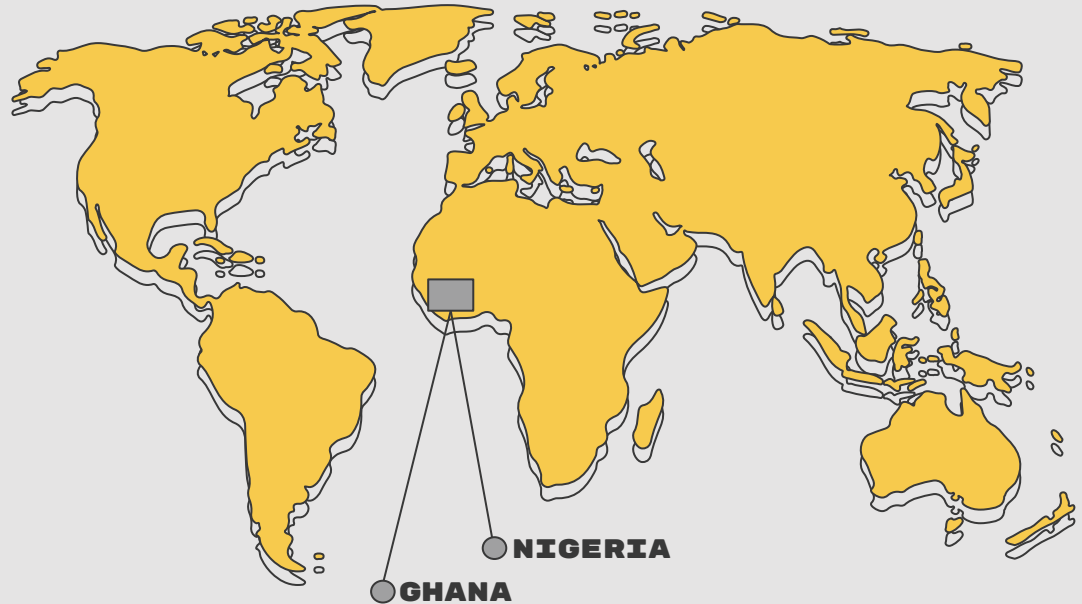


WHAT IS AFROBEATS ???

SOUNDS FROM WEST AFRICA

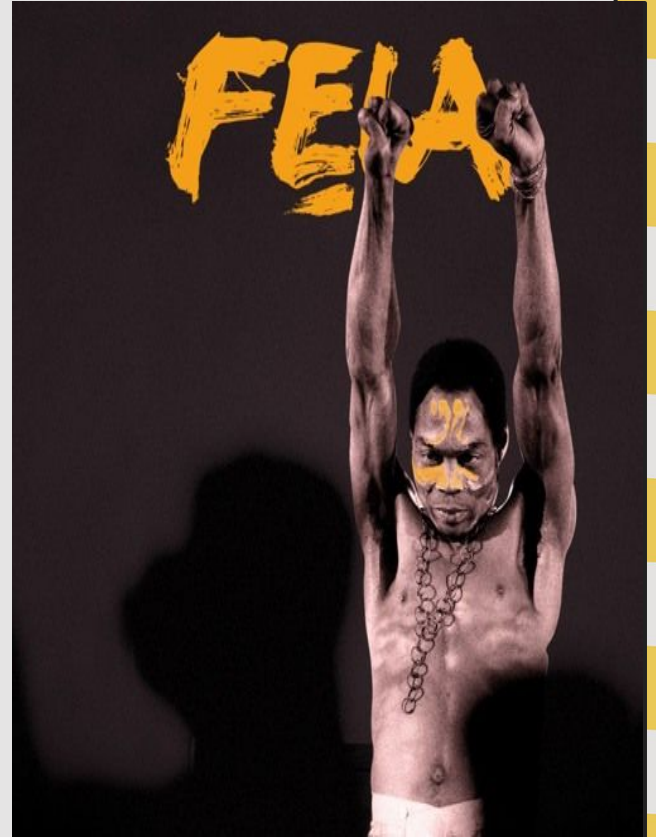
ALSO KNOWN AS

- AFRO FUSION
- AFRO DANCEHALL
- AFRO POP
- AZONTO

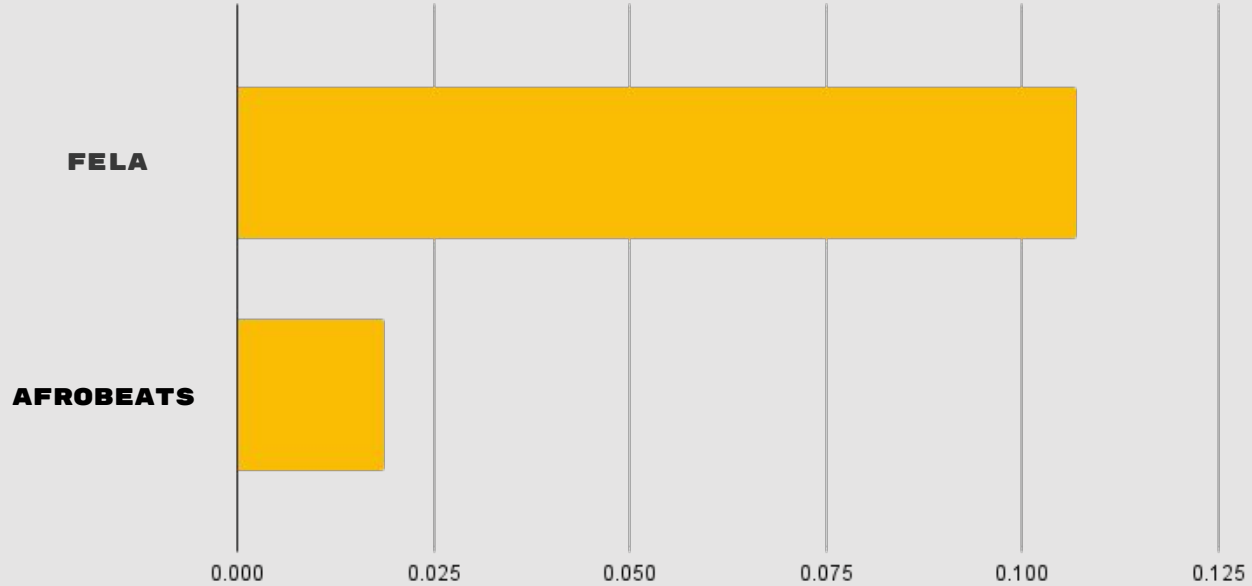


ORIGINS

- Fela Anikulapo Kuti created Afrobeat sound in the 70's
- Influenced Afrobeat(s) sound
- His sound had more Instrumentals (Saxophone)
- Highly Political. Spoke out against the military regime in Nigeria

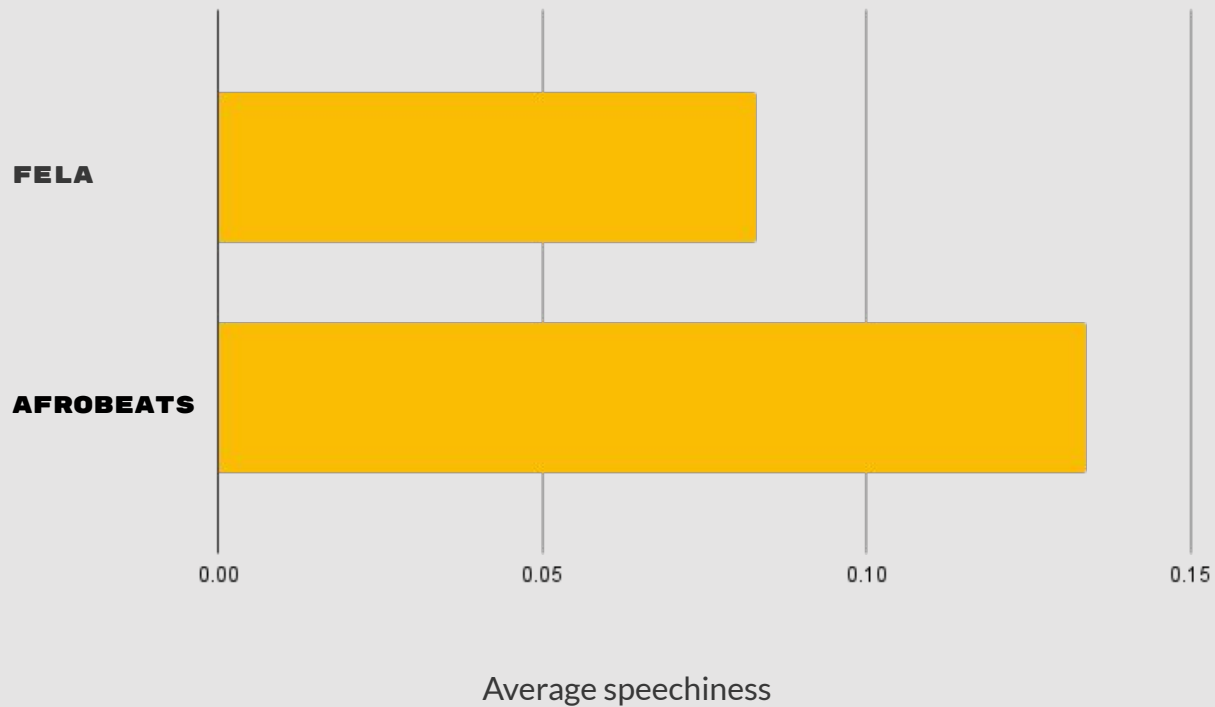


INSTRUMENTALS

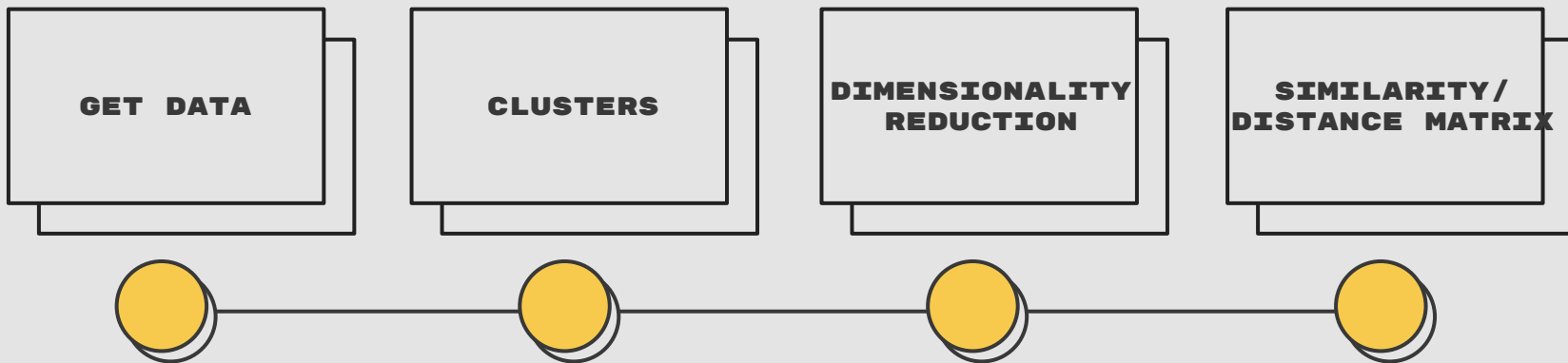


Average amount of **instruments** used in songs

SPEECH



BUILDING THE RECOMMENDER

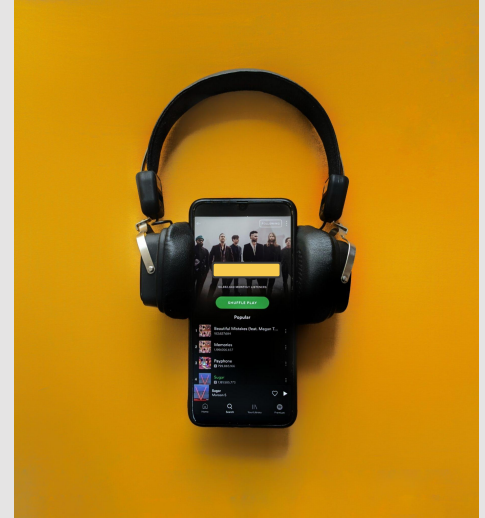


DATA GATHERING

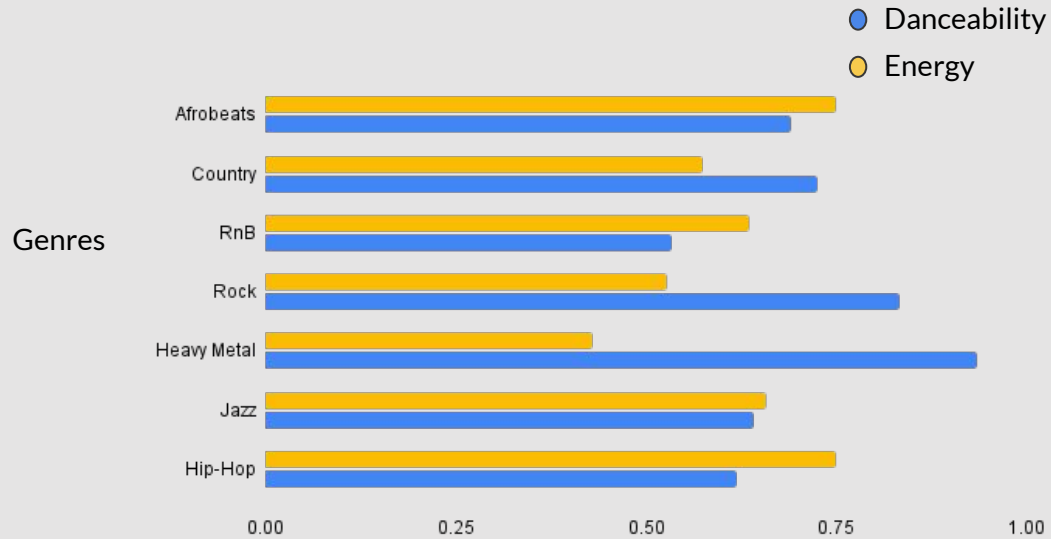
Spotify API: 1500+ afrobeat tracks

Audio features

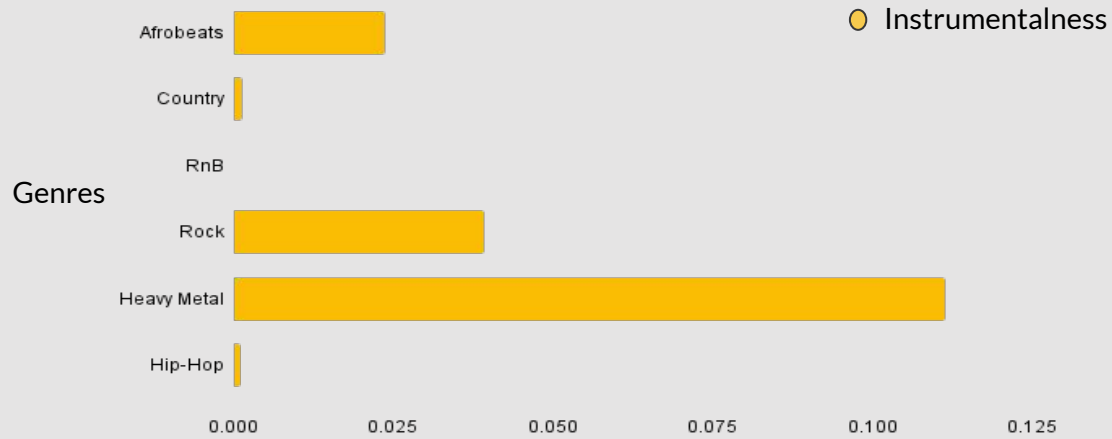
- **Danceability:** Danceability describes how suitable a track is for dancing
- **Instrumentalness:** Predicts whether a track contains no vocals
- **Energy:** Energy is a measure from 0.0 to 1.0 and represents a perceptual measure of intensity and activity
- **Acousticness:** A confidence measure from 0.0 to 1.0 of whether the track is acoustic
- **Loudness:** The overall loudness of a track in decibels (dB)
- **Speechiness:** Speechiness detects the presence of spoken words in a track



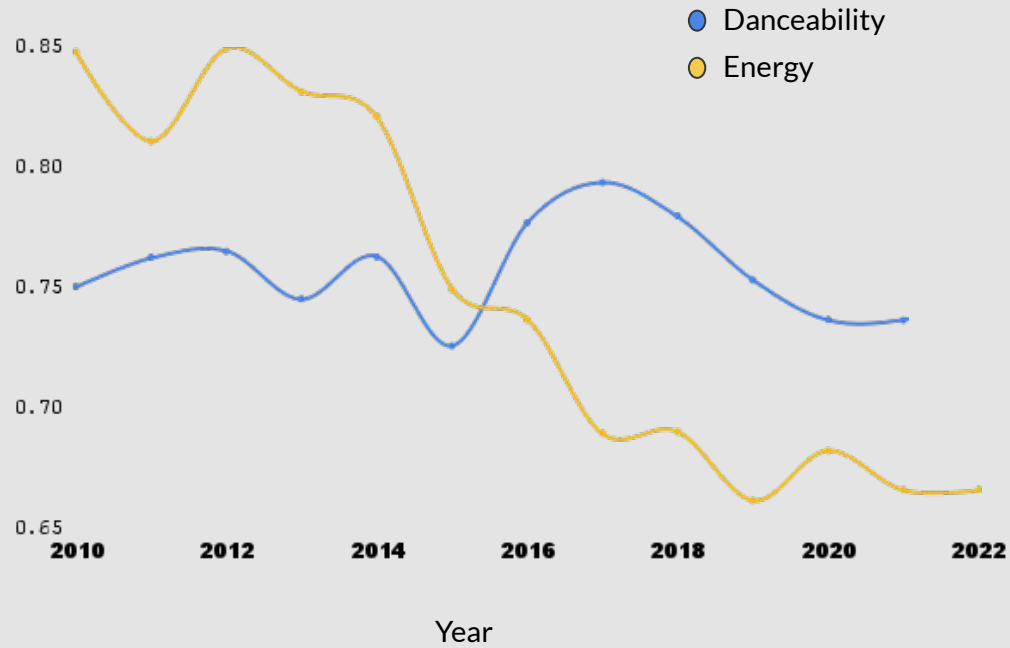
HOW AFROBEATS COMPARES TO OTHER POPULAR GENRE



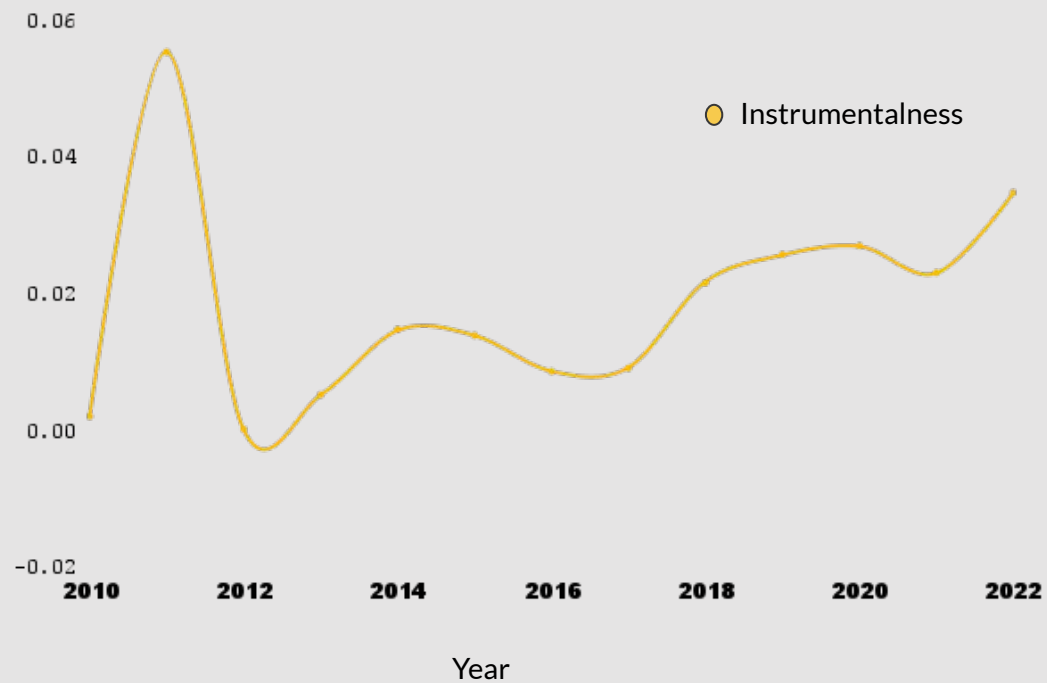
HOW AFROBEATS COMPARES TO OTHER POPULAR GENRE



DANCEABILITY AND ENERGY OF AFROBEATS OVER TIME



INSTRUMENTALNESS OF AFROBEATS OVER TIME



DIMENSIONALITY REDUCTION

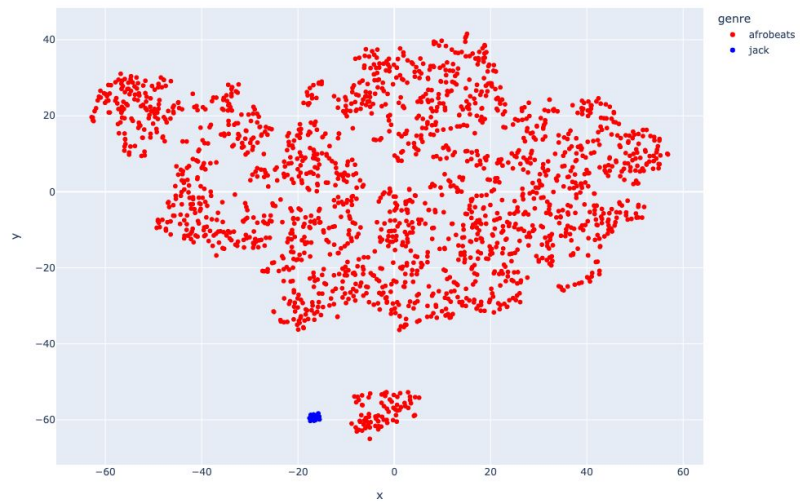


PCA
or
TSNE

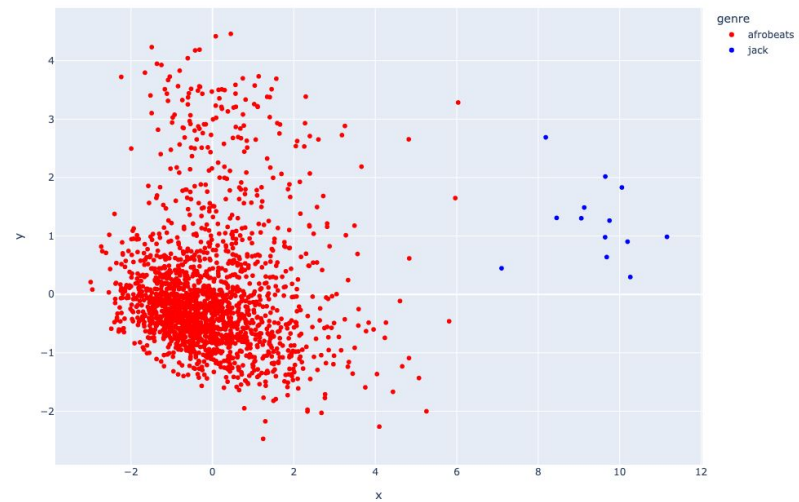


Combination of PCA
and TSNE

TSNE



PCA



Distance Metrics

- Cosine similarity
- Euclidean distance



STREAMLIT DEMO



CONCLUSIONS

- TSNE is a great tool for visualizing high dimensional data, however when used in an App it slows performance

NEXT STEPS

- Build a more interactive app with Flask or Django
- Create a recommender that's flexible for all genres not only Afrobeats

THANKS !

CREDITS: This presentation template was
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