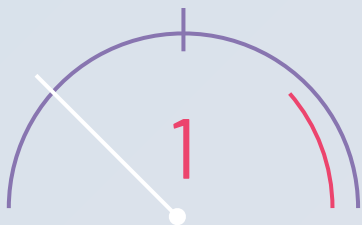adam zucker

The Sound of Science

THE PROBLEM

The way humans perceive music is fundamentally emotional, but there's a place for science too!

With digital signal processing libraries like Librosa, we'll extract salient audio features from unheard music and compare it to popular music in order to connect new artists with new fans!
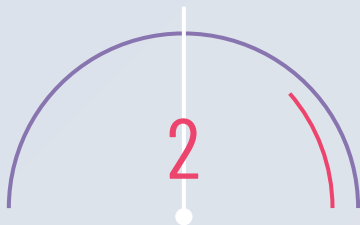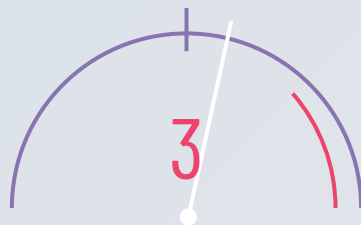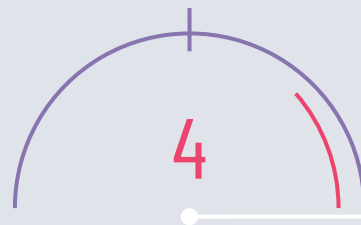
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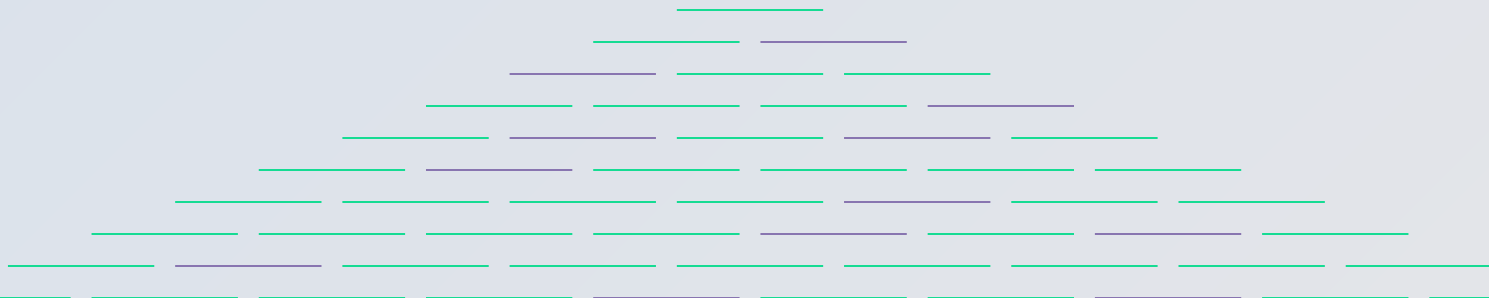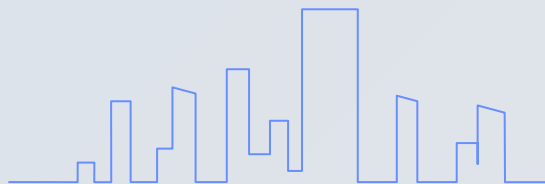
What music does
yours resemble?

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The Future

Oh the places
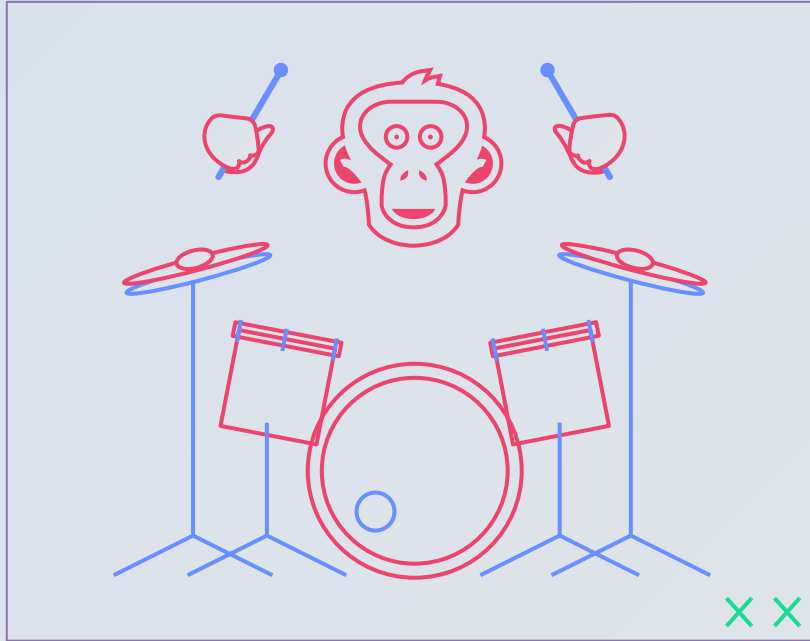we'll go!

1

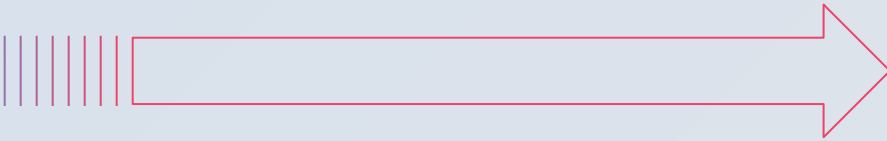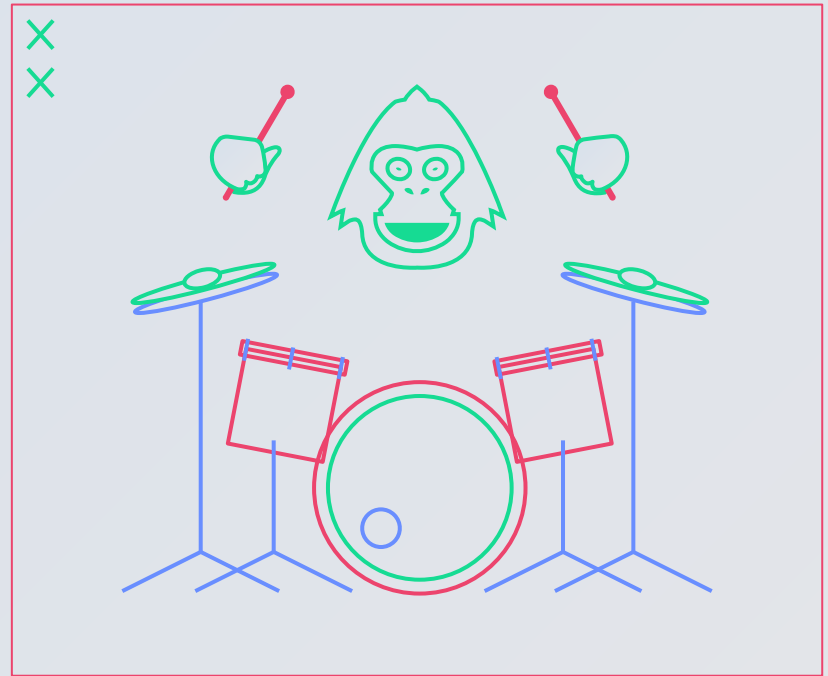## Data & Background

Where do we start?

BACKGROUND

With over 15 years of experience in the music industry, first as a musician and performer, and later as a sound designer, audio engineer, and producer, I believe I'm in a unique position to address this problem.

DATA

- Spotify

- Librosa

- A few good tunes

- A few good friends
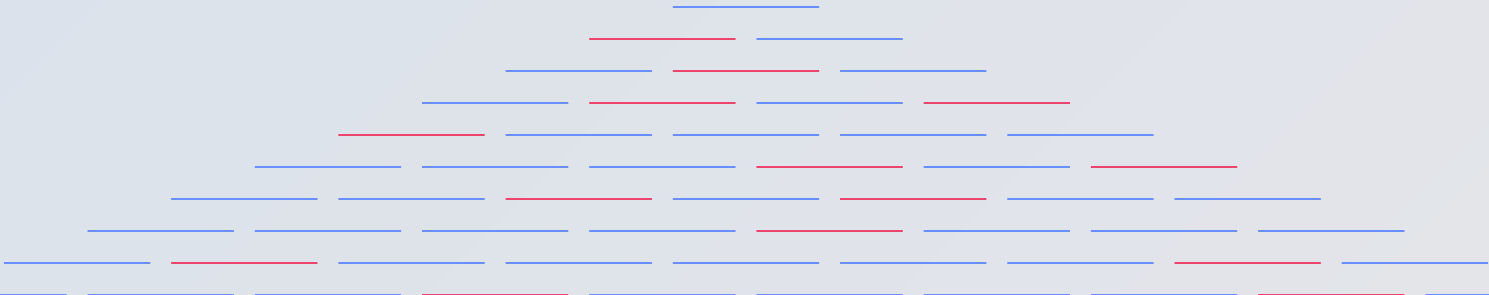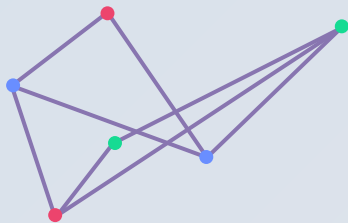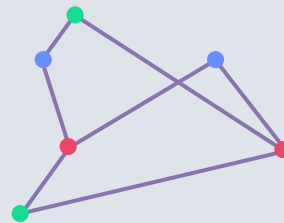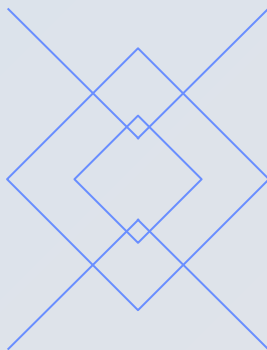
Features & Engineering

2

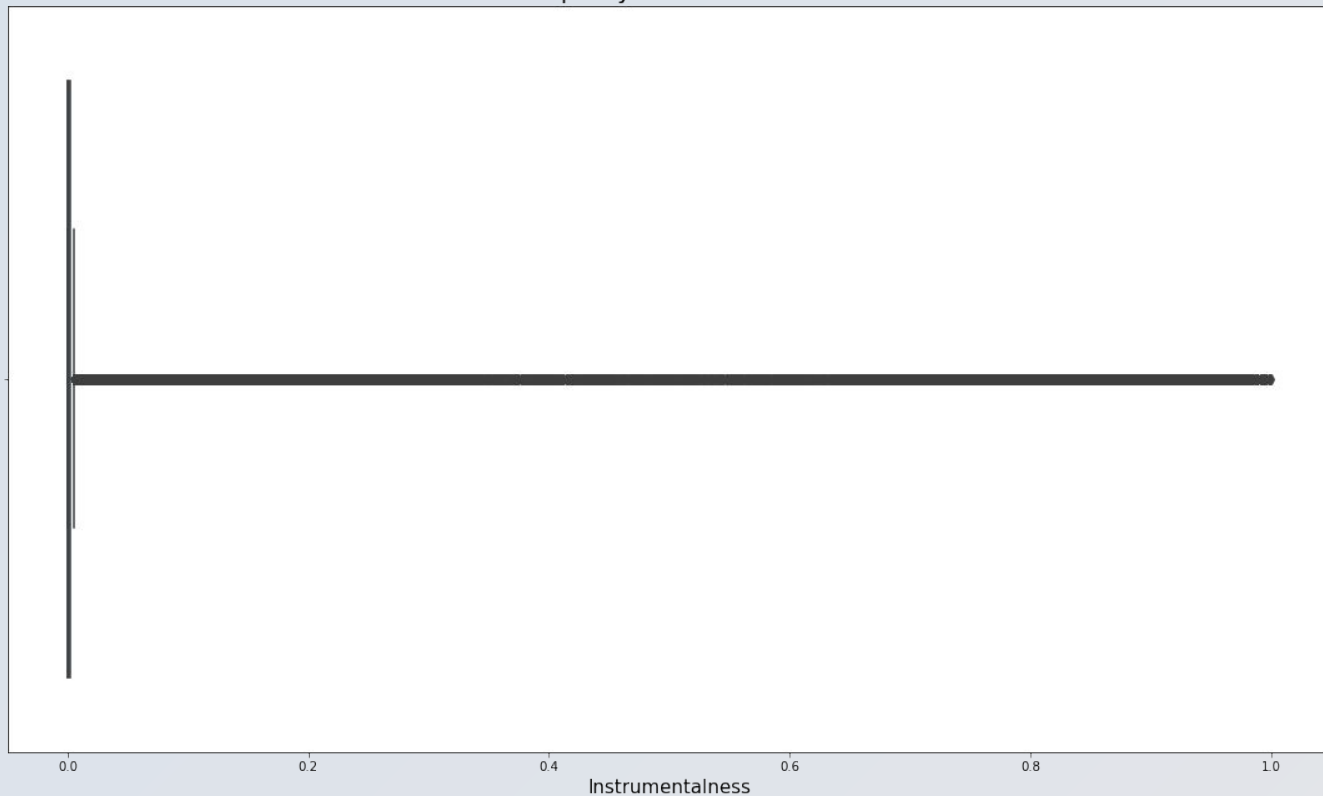Let's take a look!

SPOTIFY

A mixed bag
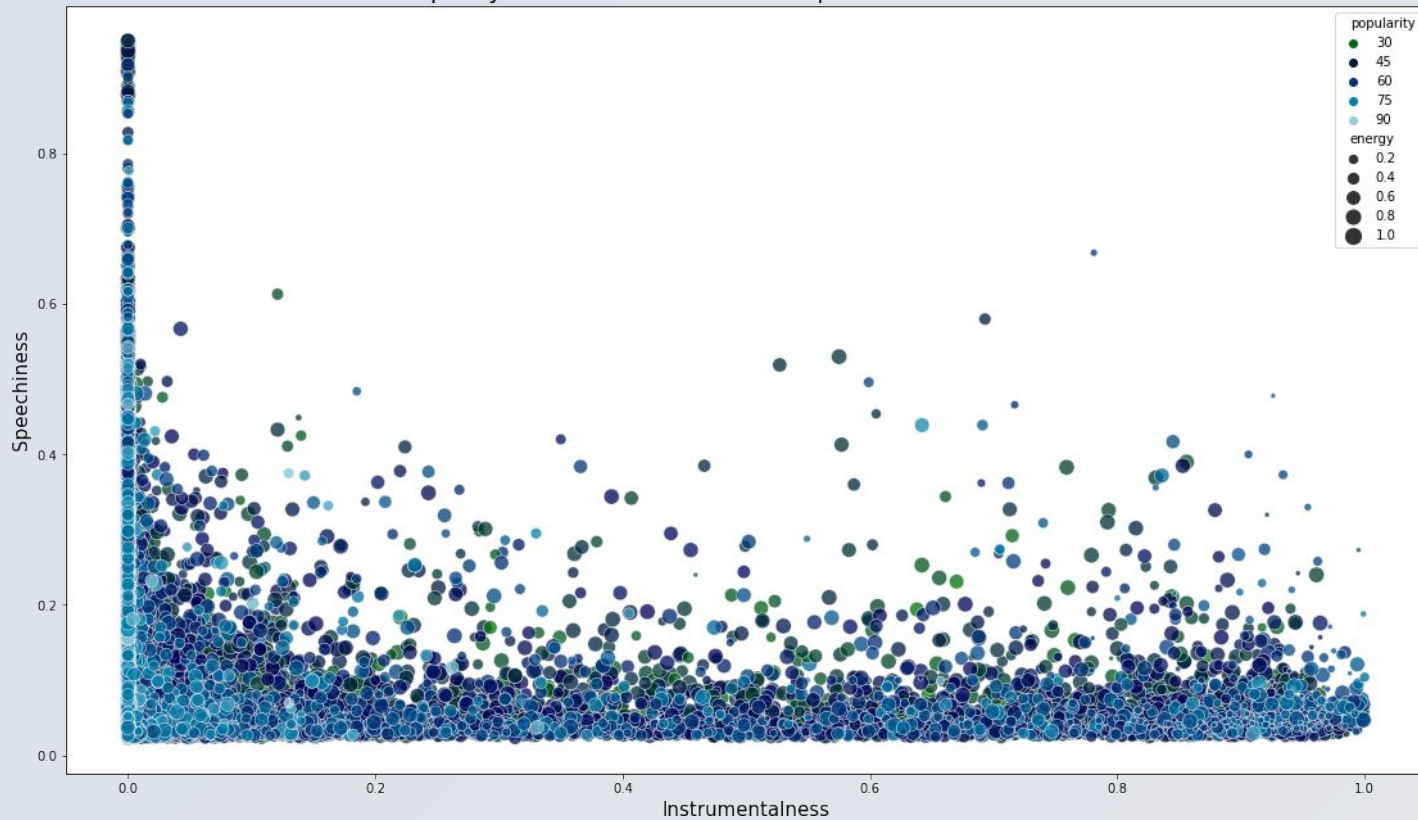
LIBROSA

Granular, scientific

SPOTIFY FEATURES

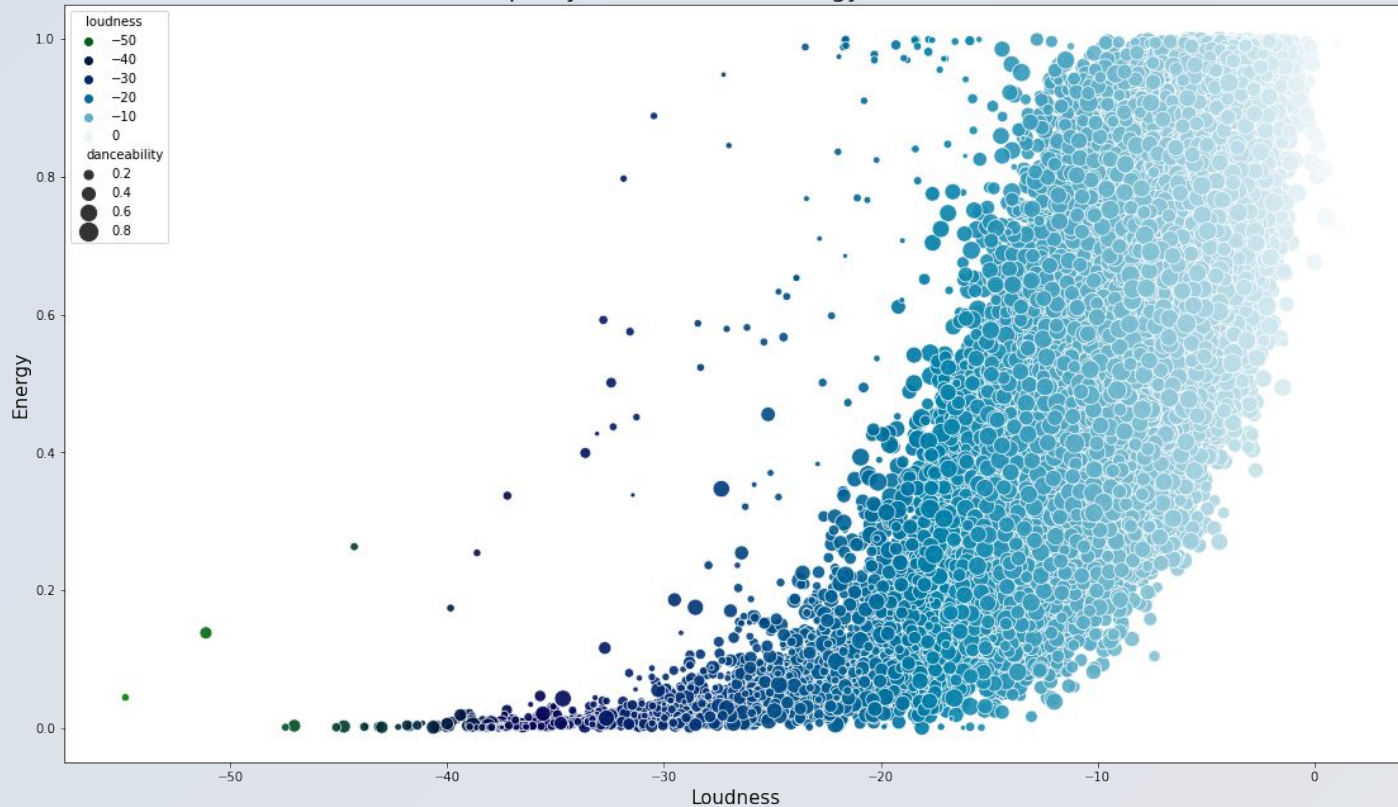Distribution of Spotify's Instrumentalness Feature

SPOTIFY FEATURES

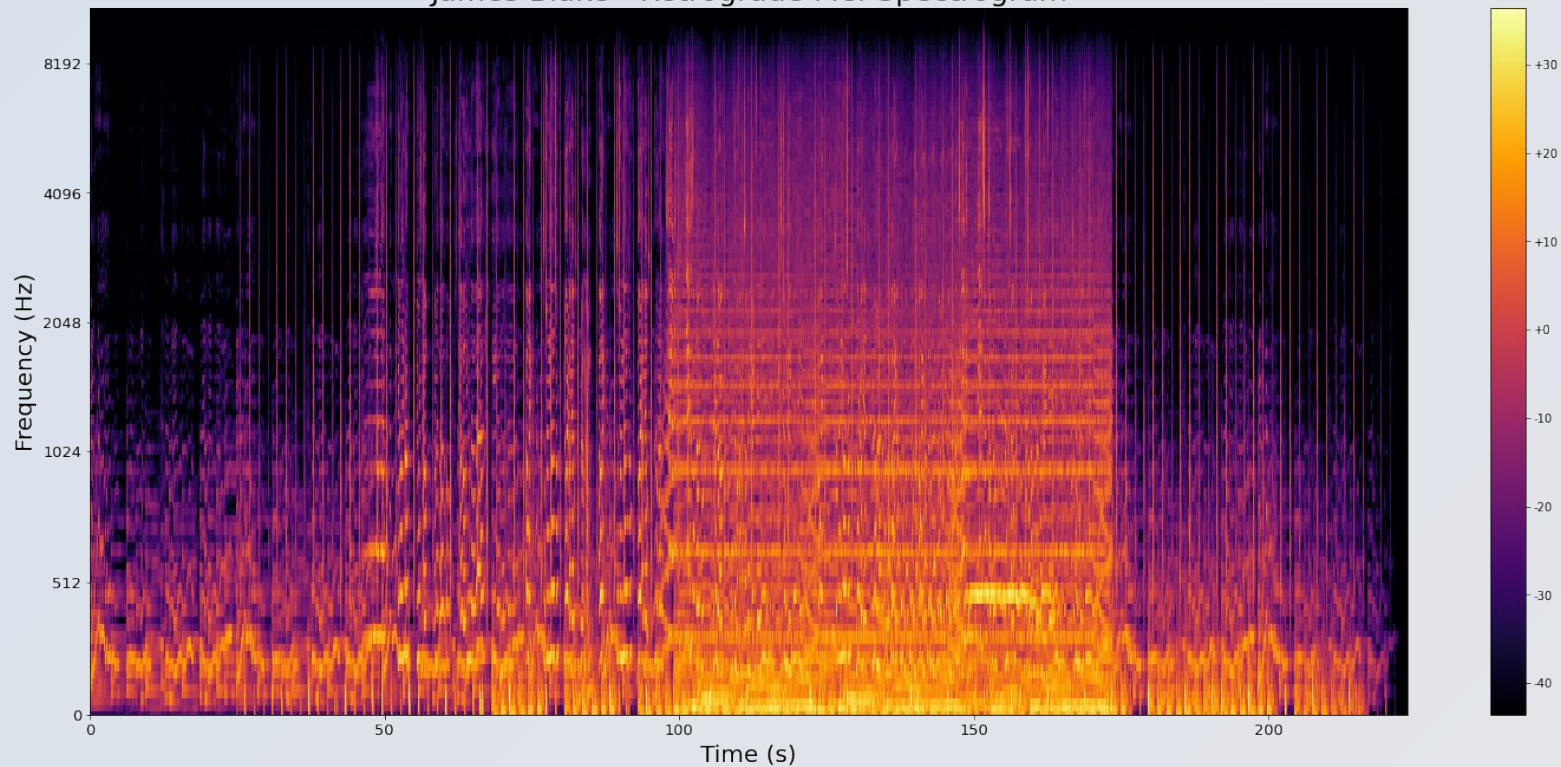Spotify's Instrumentalness vs Speechiness Features

SPOTIFY FEATURES
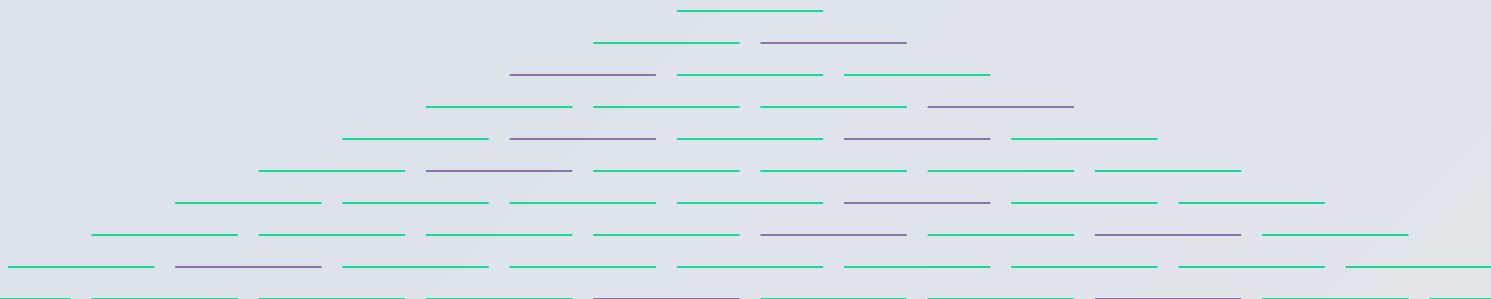
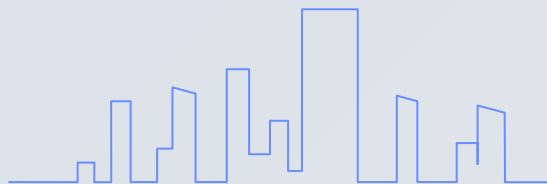Spotify's Loudness vs Energy Features

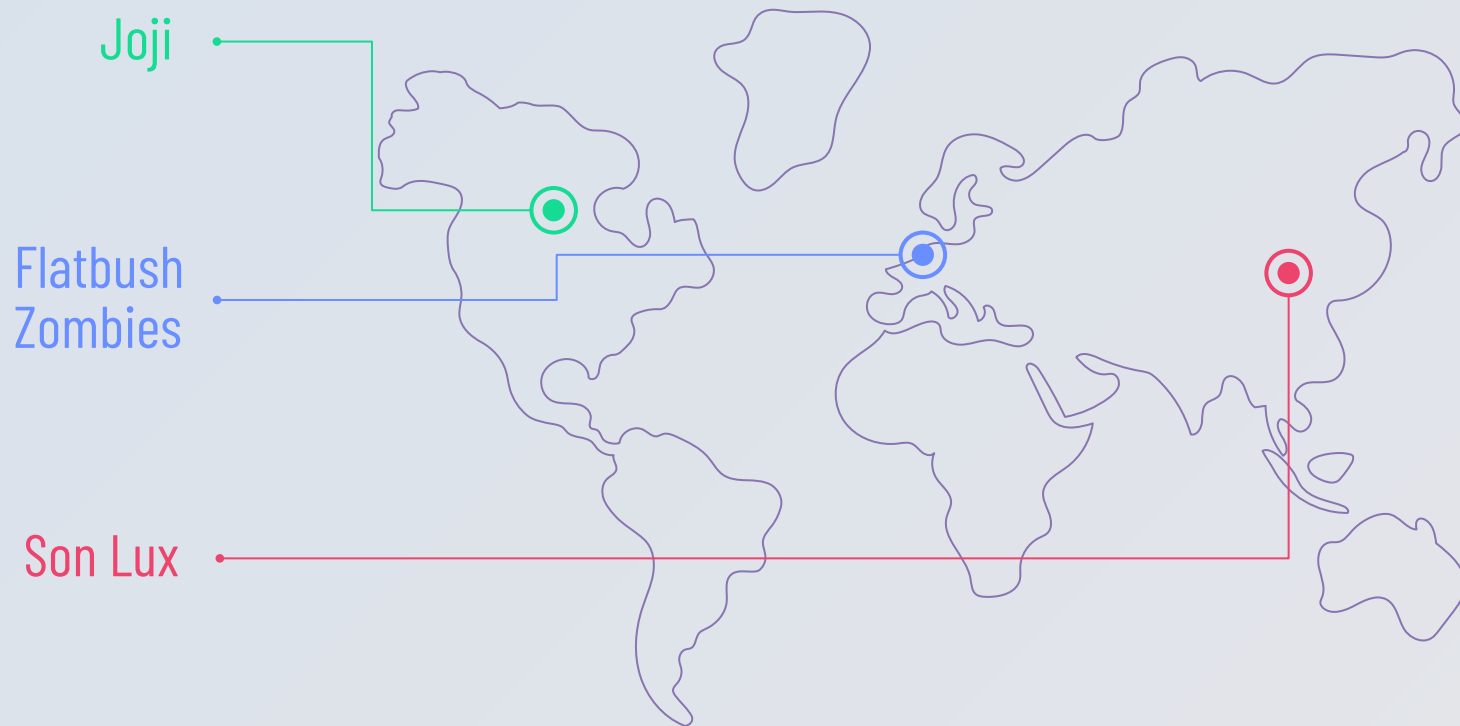# SPECTROGRAMS

James Blake - Retrograde Mel-Spectrogram

3

The Product

A recommender system
for the working musician
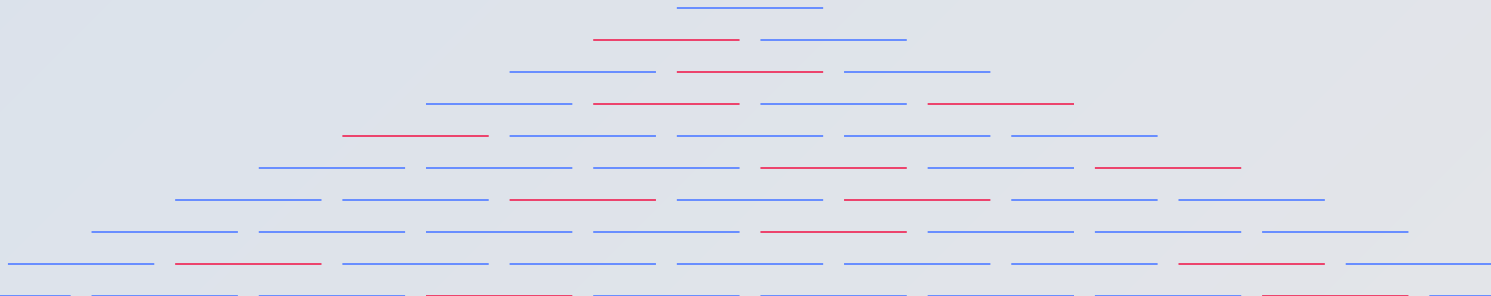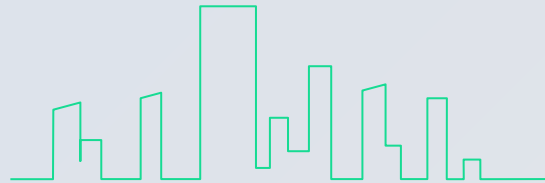
WHERE YOU FIT

Joji

Flatbush
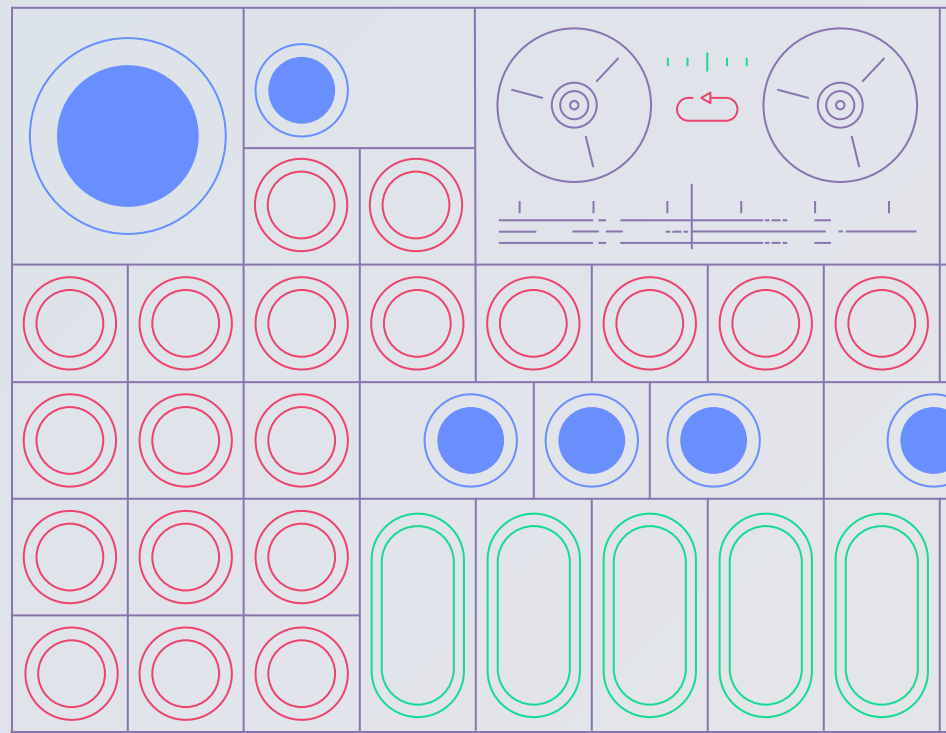Zombies

Son Lux

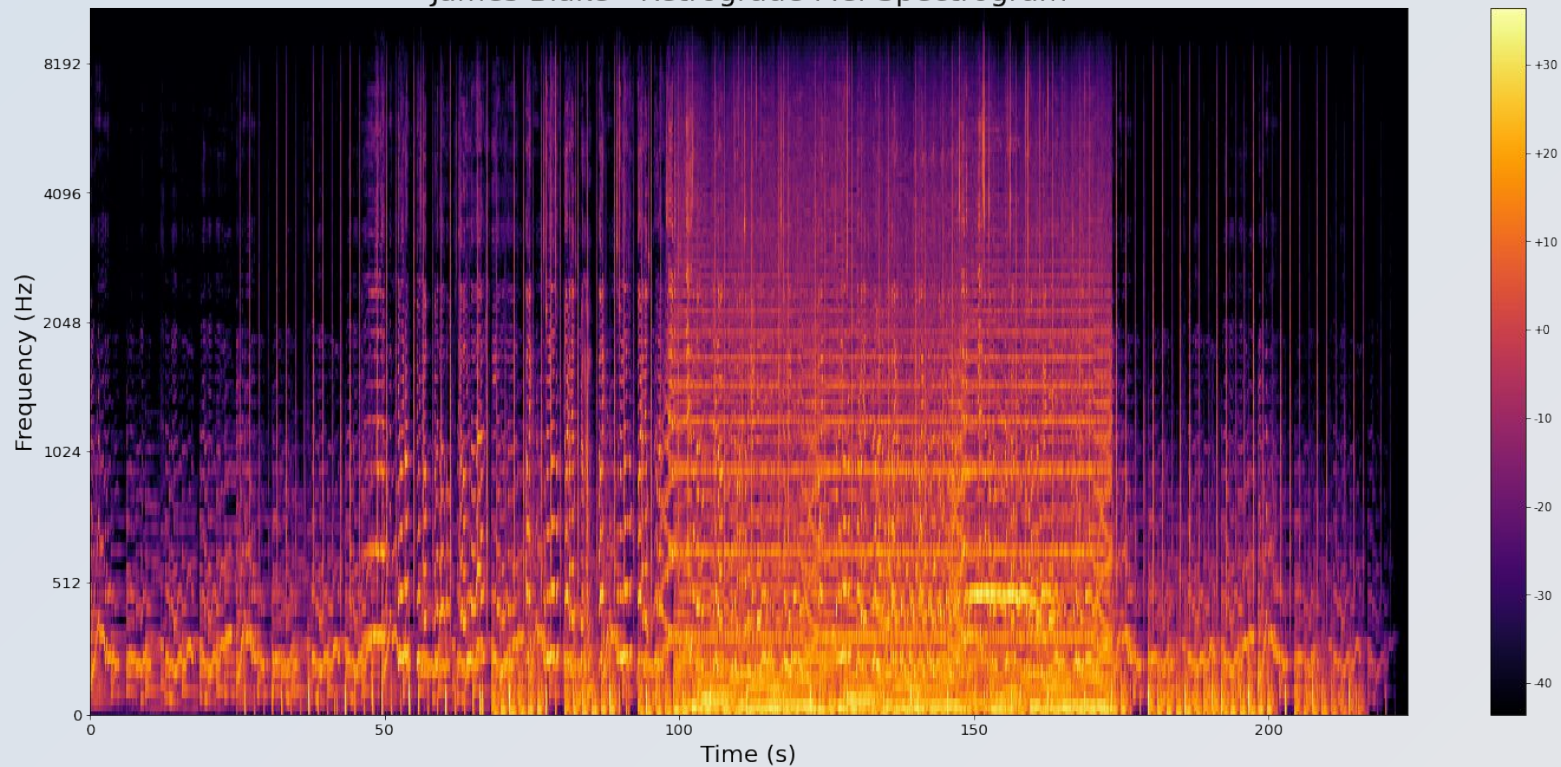# The Future

Where are you going?

4

WHAT'S NEXT?

- Reliable metrics

- Building my own dataframe

- A robust recommender

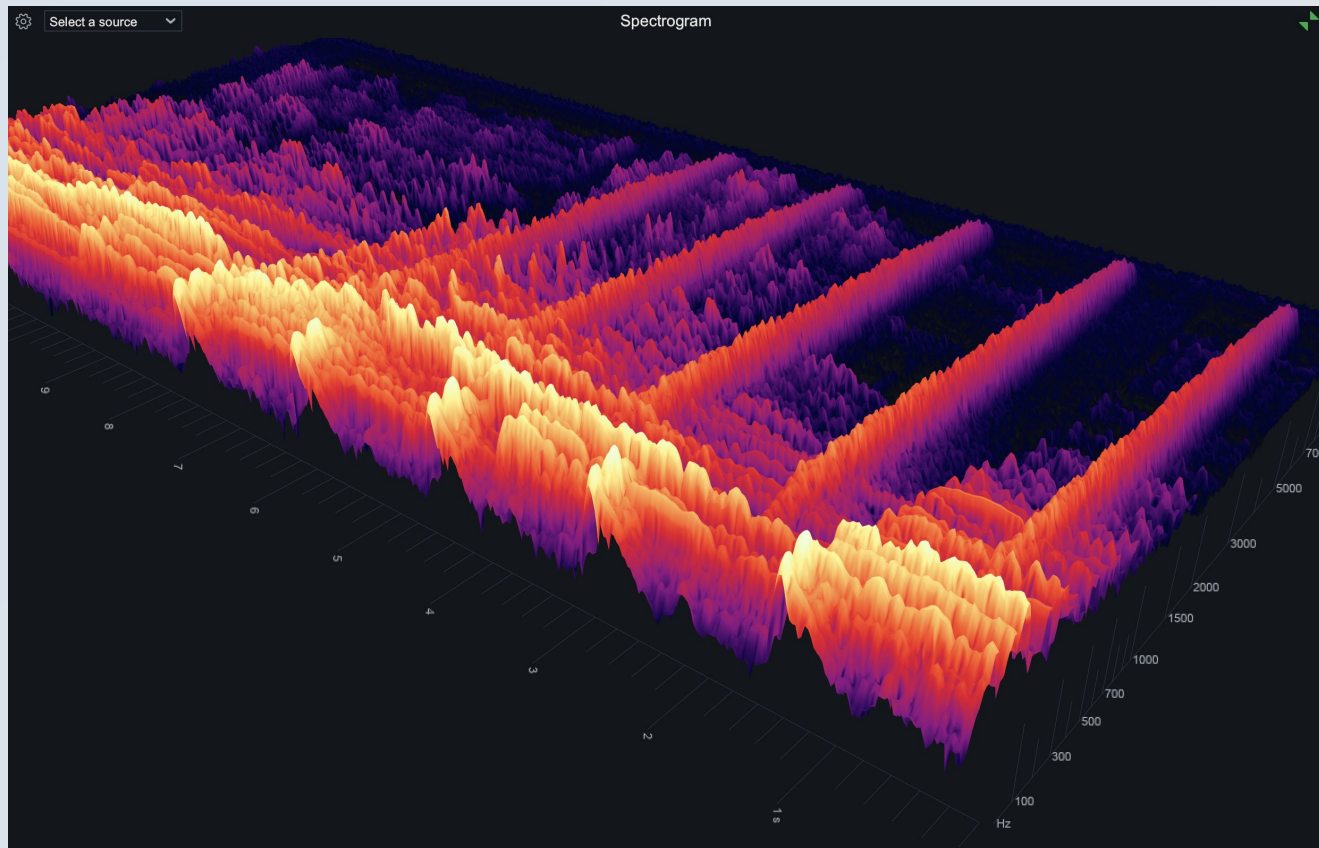- Global listening trends and demographic data

- A user-facing app

SPECTROGRAMS

James Blake - Retrograde Mel-Spectrogram

SPECTROGRAMS

CONCLUSIONS

Musical Metrics

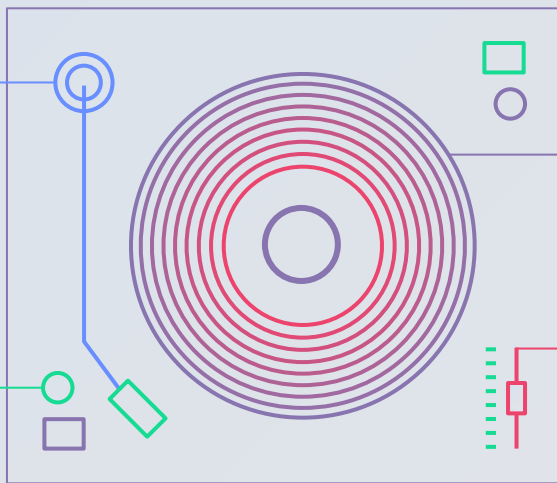Quantifying music takes science and intuition

Deep Learning

Processing HD spectrograms as image data in CNNs and RNNs

DSP

The ever-improving landscape of digital signal processing

Time

Above all, development will take time

Thanks!

Questions?

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LinkedIn | GitHub