Play Something

by

Spotify®

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Opportunity

Objective: increase DAUs/MAUs on Spotify

Impact Hyp: by providing the user with a more personalized experience with daily relevant content, Spotify will increase app stickiness and retention.
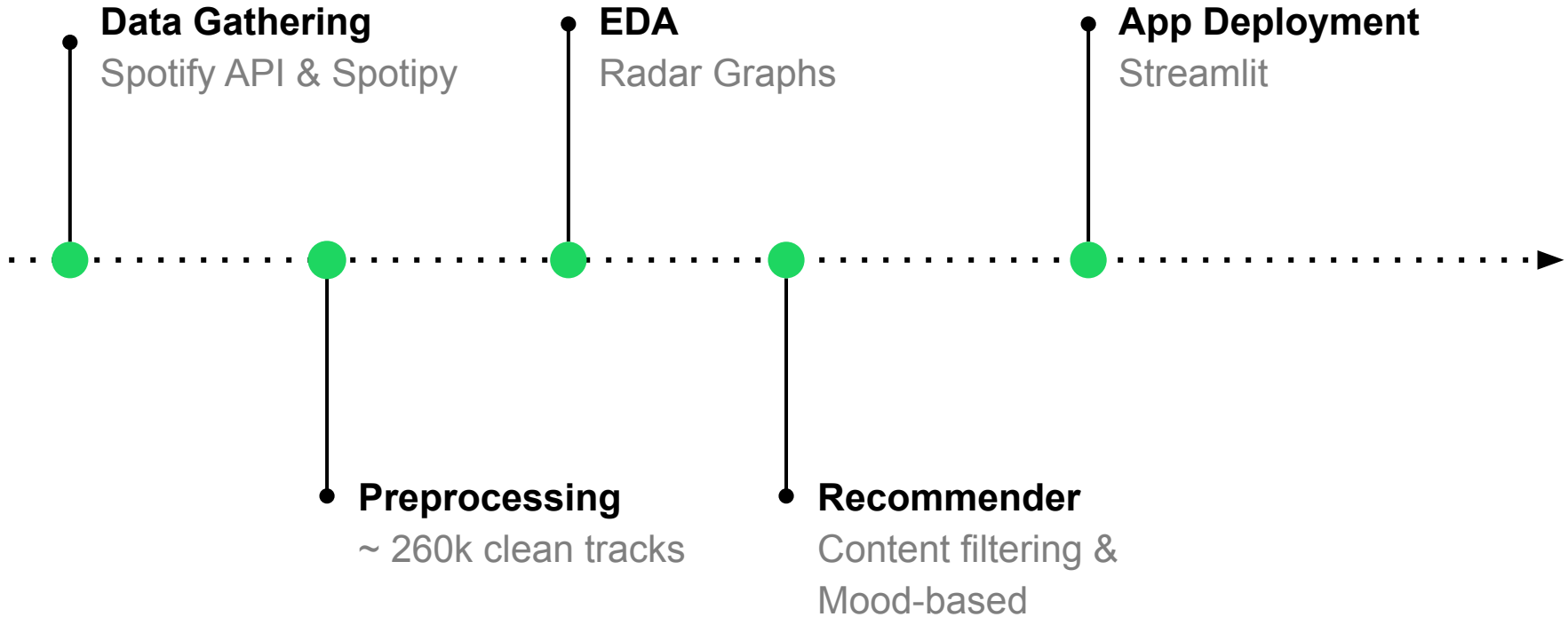

Daily Crunch: Spotify's new 'Only You' feature expands on personalization investment

Alex Wilhelm @alex / 6:10 PM EDT • June 2, 2021

Comment

Methodology

Data Gathering
Spotify API & Spotipy

EDA
Radar Graphs

App Deployment
Streamlit

Preprocessing
~ 260k clean tracks

Recommender
Content filtering &
Mood-based

RECOMMENDER INPUTS
Personas & Music Features

FKA TWIGS

Music Features

Source: Spotify API

LOD: Tracks

Use Case: Music Profile & Music Taste

Transformations: MinMaxScaler normalization

Music Feature		Meaning
	Danceability	Tempo, rhythm stability, beat strength
	Energy	Intensity & activity
	Loudness	Psychological correlate of physical strength
	Speechiness	Presence of spoken words
	Acousticness	Specifically relating to sound
	Duration	Length of a track
	Instrumentalness	Not containing vocals
	Liveness	Presence of an audience
	Valence	Musical positiveness
	Tempo	Pace of a given piece

Music Data

Study: mood to music genre mapping
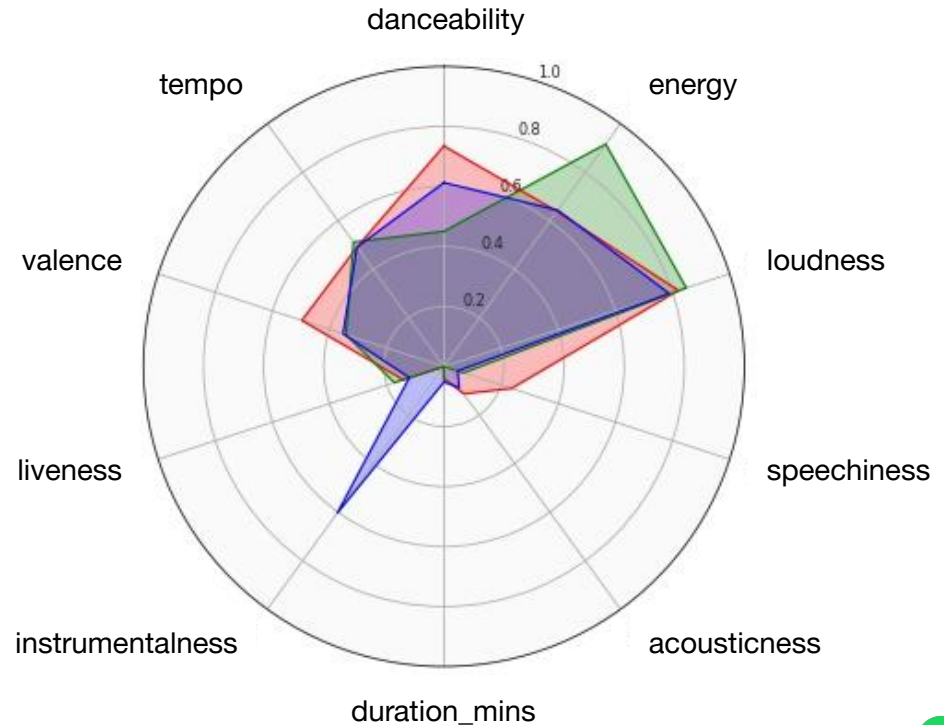
Source: Spotify API

Scope: 8 music genres

Tracks: 256,000 after preprocessing

Genre Comparison

Rap   Metal   Electronic

danceability, energy, loudness, speechiness, acousticness, duration_mins, instrumentalness, liveness, valence, tempo

RECOMMENDER OUTPUTS
Play Something App

BILLIE EILISH

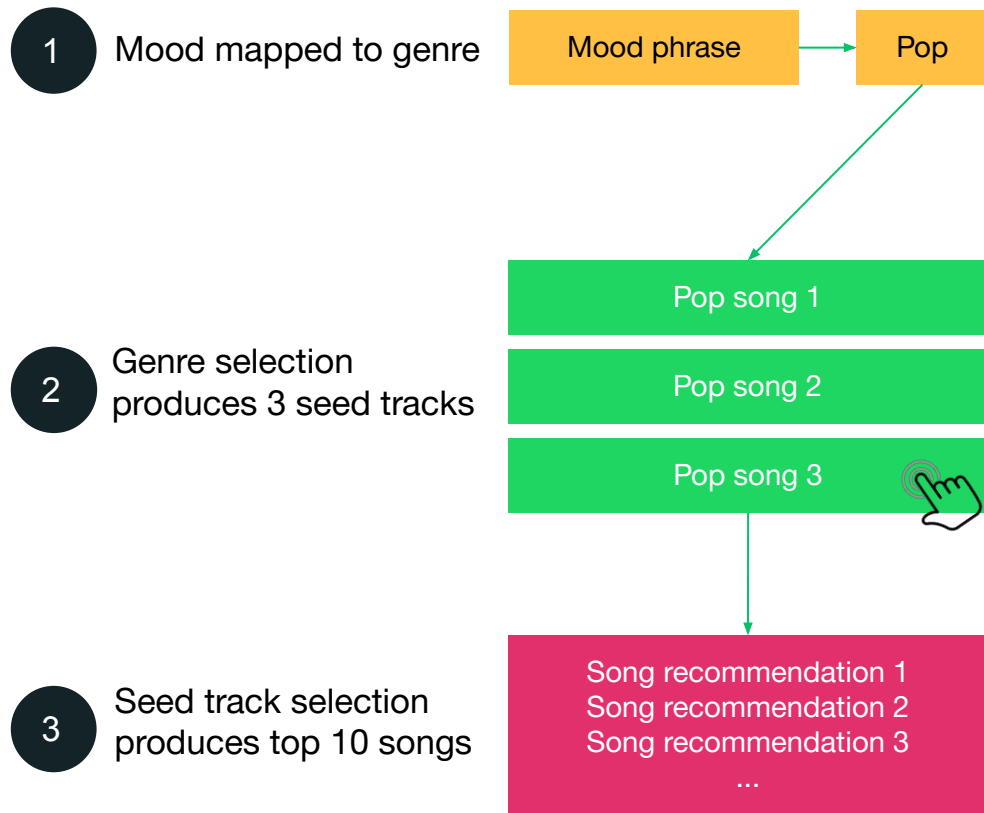# Recommender

Content & Mood-based recommender leveraging cosine similarity

1. Mood → Genre

2. Genre → Top 3

3. Seed Track → Top 10

1 Mood mapped to genre

| Mood phrase | → | Pop |

2 Genre selection produces 3 seed tracks

Pop song 1

Pop song 2

Pop song 3

3 Seed track selection produces top 10 songs

Song recommendation 1
Song recommendation 2
Song recommendation 3
...

Where do we go from here?

- **Personalization:** key to Spotify's success; need to standardize an accurate understanding of the user and their habits so as to be able to serve the right recommendation to the right user at the right time

- **Exogenous elements**: variability in musical taste is particularly impacted by the the context the user lives in (e.g. weather, politics); these elements should be part of the recommendation engine

- **Diversity:** successful recommender will enable the user to explore new musical horizons and minimize the presence of echo chambers

Questions?