



# SPOTIFY APP STORE REVIEWS

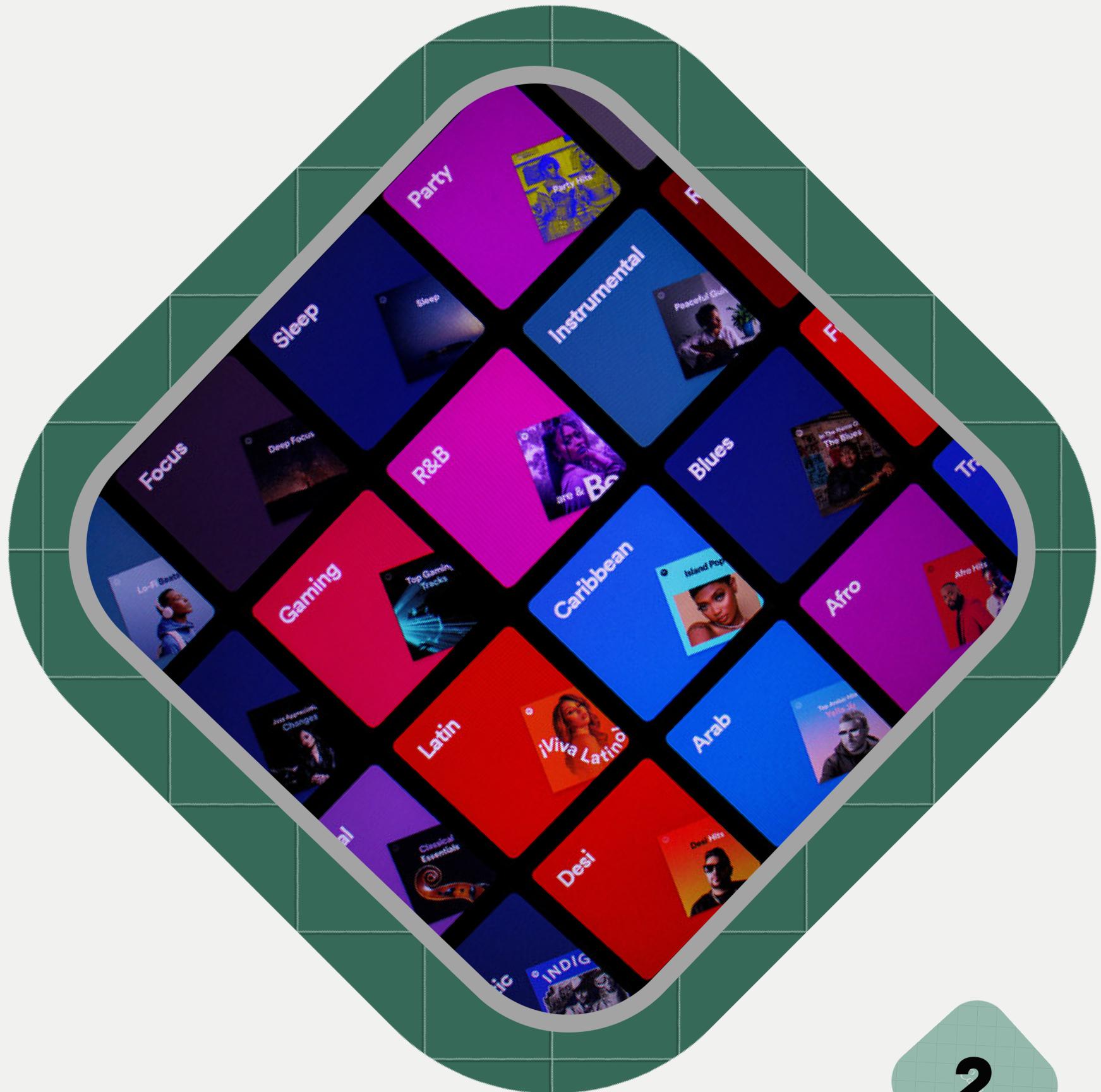
CLASSIFYING USER SENTIMENT

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# PURPOSE

## WHY SENTIMENT ANALYSIS?

- **UX EXPERIENCES:**
  - Monitor UX opinion on relevant features of a product/app
- **CUSTOMER LOYALTY:**
  - Extract genuine feedback from UXs to build better features and maintain strong userbase
- **OBJECTIVE INSIGHTS:**
  - Understand a product's trendiness and buzz after each new release/update



# Data

Data was found on Kaggle, containing scraped reviews from January to July 2022 in the Google Play Store.

## FEATURES INCLUDE:

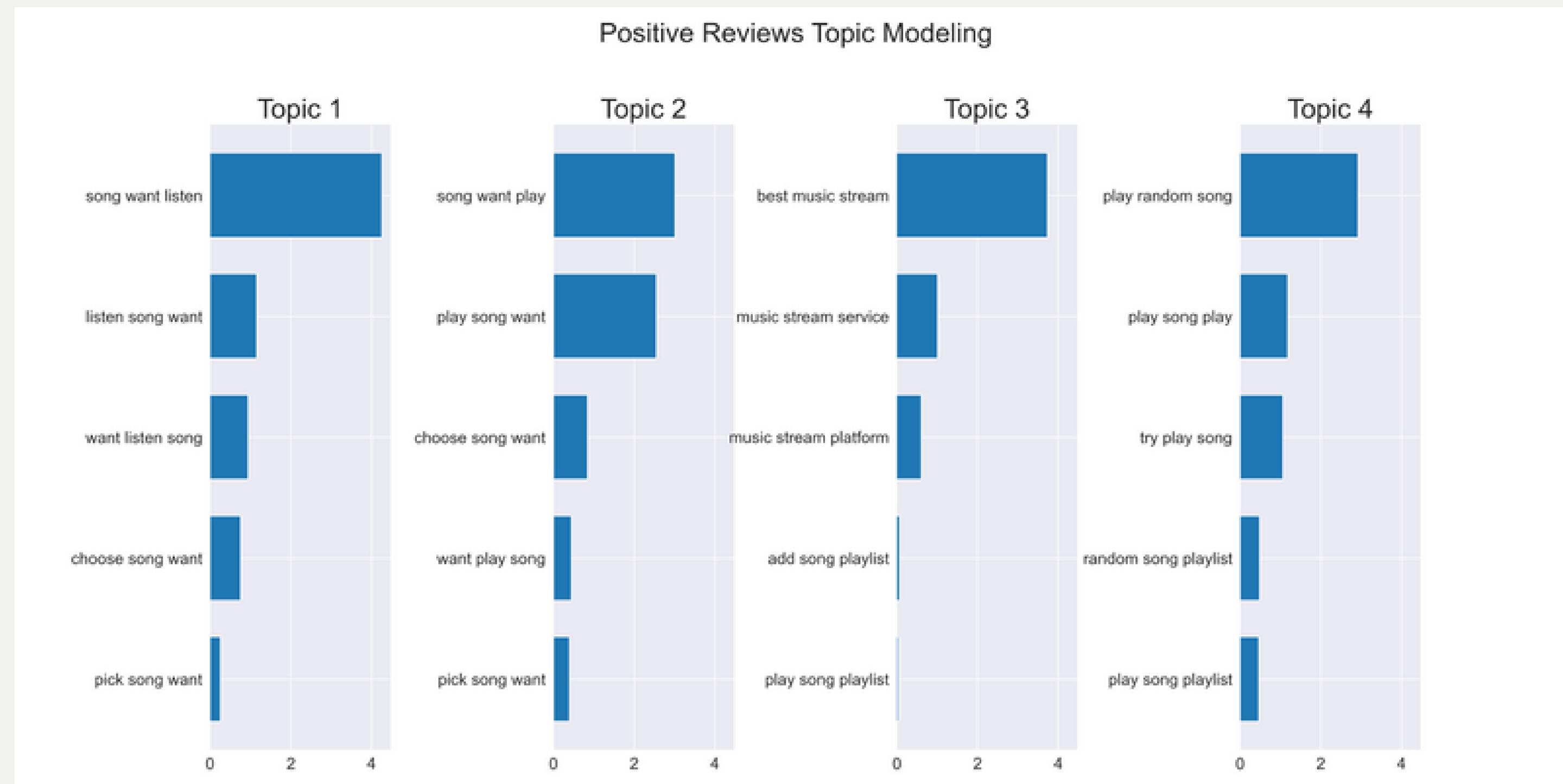
- User Review
- User Rating (1-5)
- Total Thumbs Up
- Reply = whether Spotify's customer service team replied

## FEATURE ENGINEERING:

- VADER composite scores (-1 to 1) to extract UX sentiment

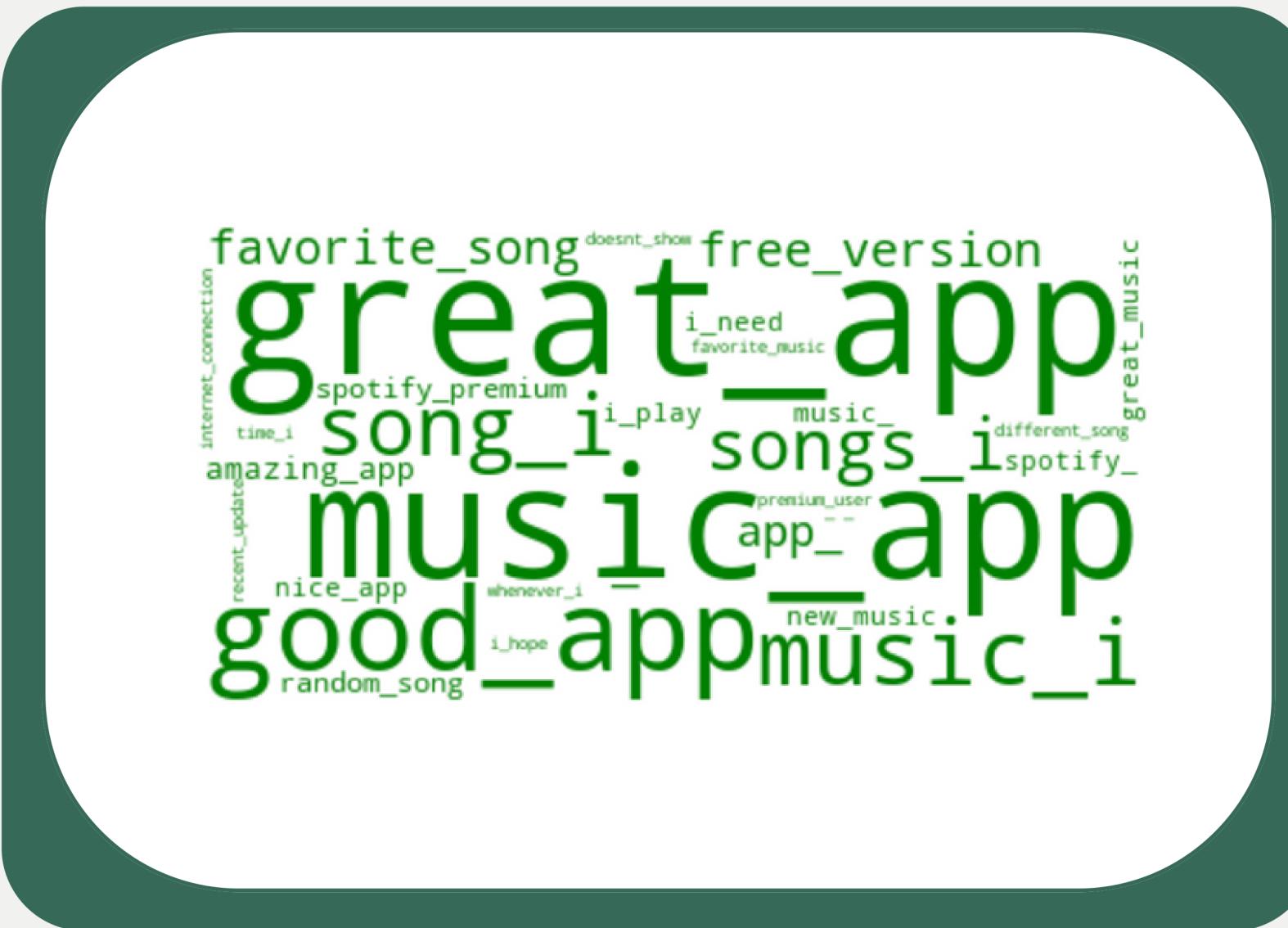


# POSITIVE REVIEWS TOPIC MODEL

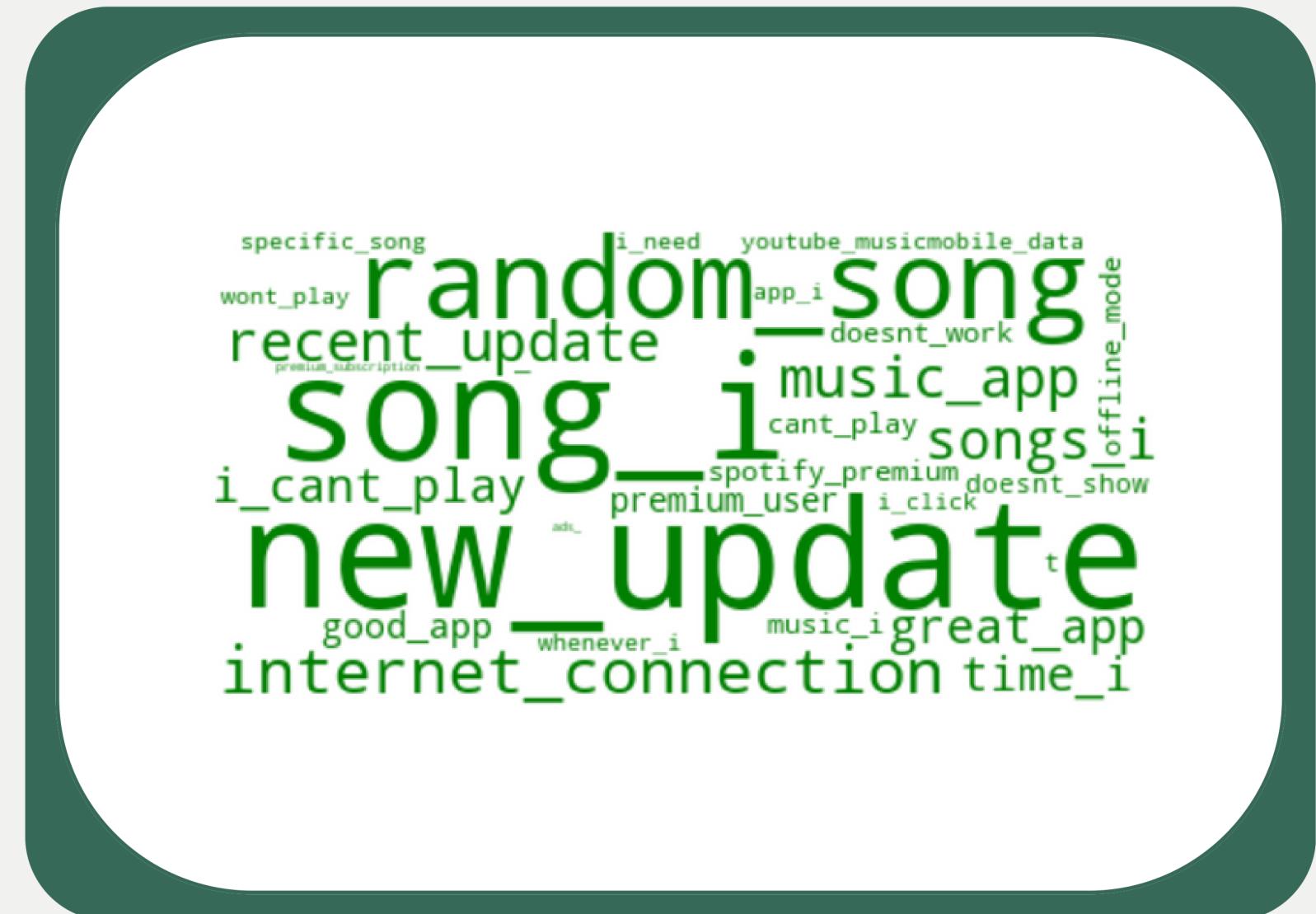


# USER SENTIMENTS

POSITIVE REVIEWS WORDCLOUD



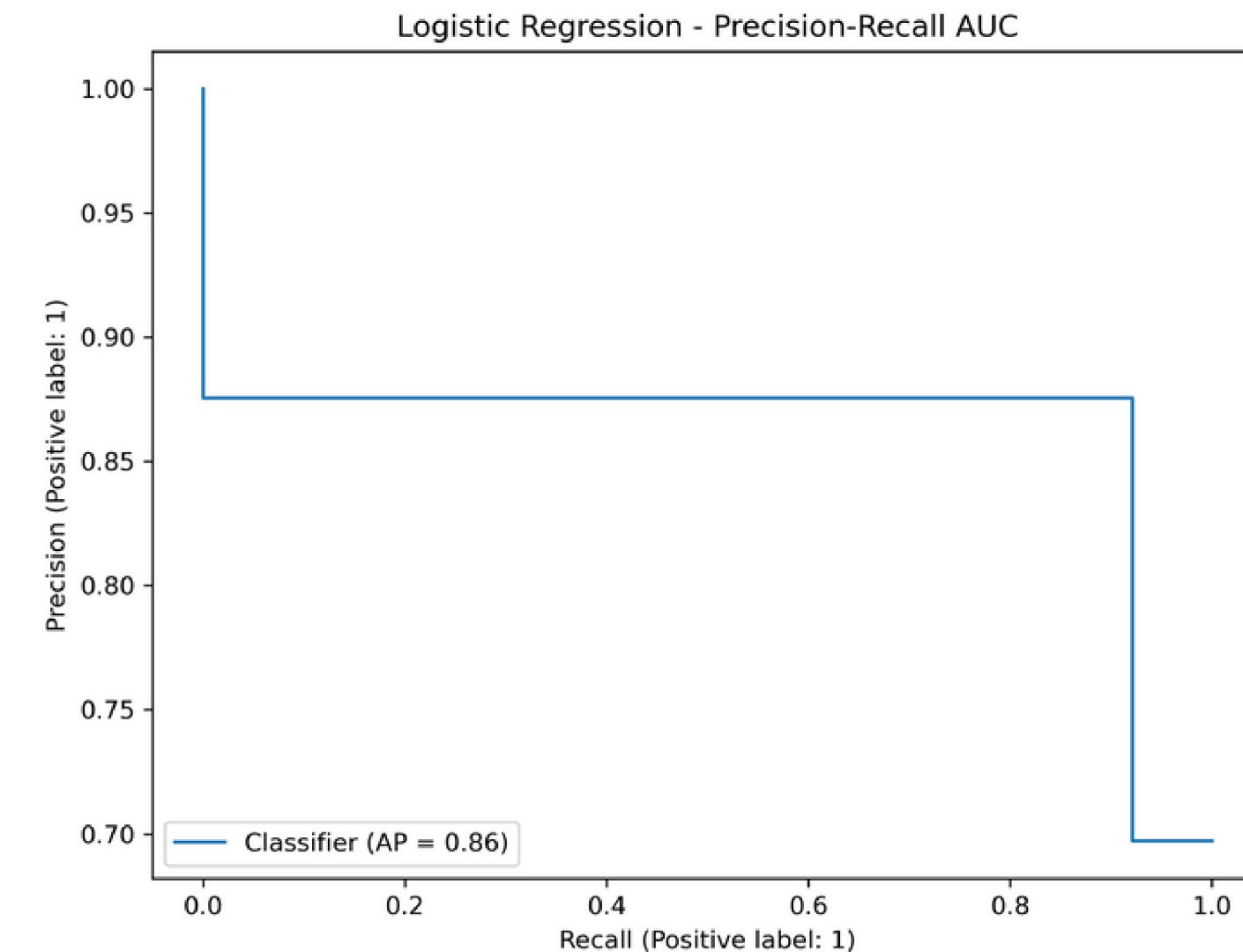
NEGATIVE REVIEWS WORDCLOUD



# Model Selection

**Baseline Dummy\_Classifier** had a **PR-AUC score of .5**

**Logistic Regression** had a **PR-AUC score of .86 with default params**



# IMPORTANT NOUN PHRASES WHEN DETERMINING USER SENTIMENT ON APP FUNCTIONALITY

available\_awesome  
access\_account  
cant\_car  
app\_apps\_artist\_audio  
bug\_buggy\_button  
amaze\_android\_annoy  
long\_look  
free\_genre  
load\_log  
good\_great\_guy  
fix\_force  
favorite\_favourite  
hope\_hour  
notification\_offline  
different\_disappear\_dont\_download  
quality\_random  
restart\_review  
mobile\_node\_honey\_month  
music\_need  
pretty\_problem  
internet\_issue  
excellent\_experience\_fact  
platform\_play\_player  
user\_track  
uri\_uric  
with\_uric\_uric\_uric  
podcast\_podcasts  
virus\_virus\_option\_such\_support  
whole\_gell

# KEY ACTIONS

## #1. ADDED UX FUNCTIONALITY

Incorporate new features to provide UXs with added customization

## #2. IMPROVING ALGORITHM

Concrete ways for UXs to validate song recommendations while listening

## #3. ADDRESSING BUGS

Address app functionality across different operating systems

# NEXT STEPS...

## #1. ASPECT-BASED SENTIMENT ANALYSIS (ABSA)

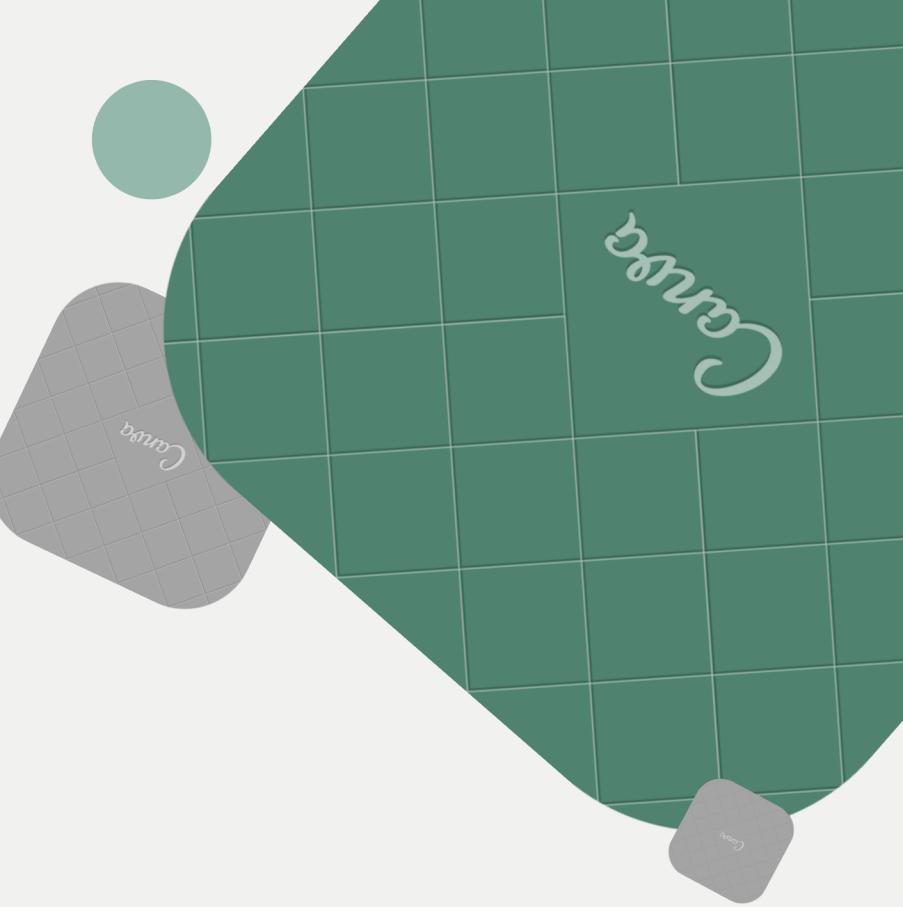
Identify the product features that are being talked about in a given review (i.e., playlist functionality), perform sentiment analysis on each aspect and evaluate overall sentiment

## #2. N-GRAMS & MODEL COMPLEXITY

Add bi-grams and tri-grams as features to improve model performance and robust analysis.

## #3. CUSTOMER SERVICE RESPONSE TIME

Build a custom scraper to extract the time at which Spotify's Customer Service Team replied. Calculate the delay in response time for reviews replied to and use that as a feature.



# THANK YOU

QUESTIONS?



[HTTPS://GITHUB.COM/ASOYLATTE03/SPOTIFY-APP-REVIEWS](https://github.com/ASOYLATTE03/SPOTIFY-APP-REVIEWS)



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