SPOTIFY

Introducing “*Hum to Search*” on Spotify

Making Music Discovery as Intuitive as the Way You Sing

CONTEXT

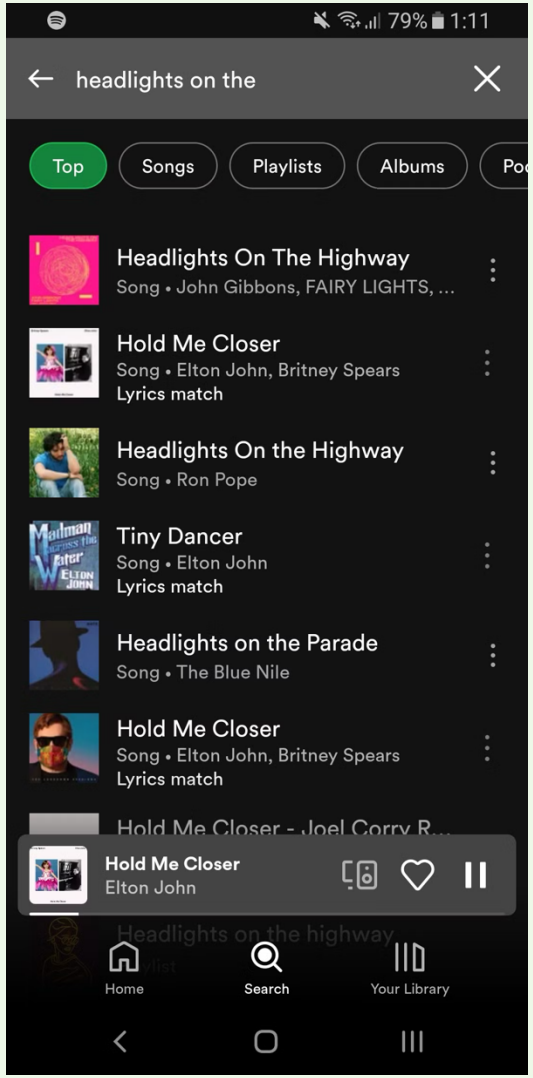
How Do You Find a Tune Stuck in Your Head?

Music discovery today relies on song titles, playlists, or artist searches. However, users often struggle to find a song when they can only remember how it sounds—not the name or the lyrics. This gap creates friction for users trying to identify a tune stuck in their head or discover forgotten favorites.

Additionally, users frequently encounter situations where they hear a song playing nearby—at a café, live performance, or social gathering—and are unable to identify it. This is another common pain point that traditional search methods cannot solve.

While Spotify excels at personalized recommendations and curated playlists, it currently lacks a feature that allows users to search by humming or singing a melody, a feature already adopted by competitors like SoundHound or Shazam.

In this case study, I explore whether integrating **Hum to Search**, a feature that allows users to identify songs by humming, singing, or melody input, could make Spotify the most intuitive and seamless music discovery platform.



HYPOTHESIS

If Spotify introduces a "**Hum to Search**" feature, then users will find it easier to discover songs, leading to increased engagement and user retention on the platform.

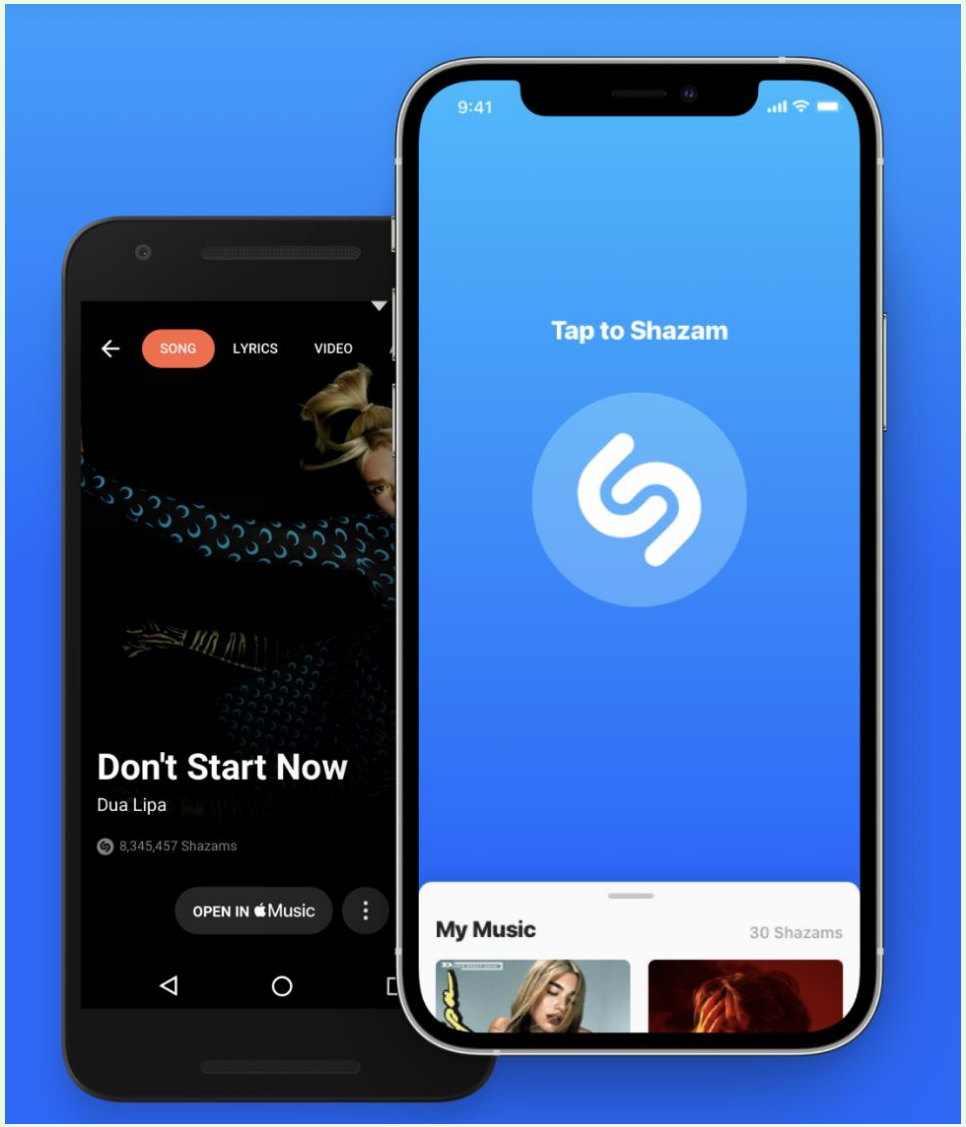
THE MARKET

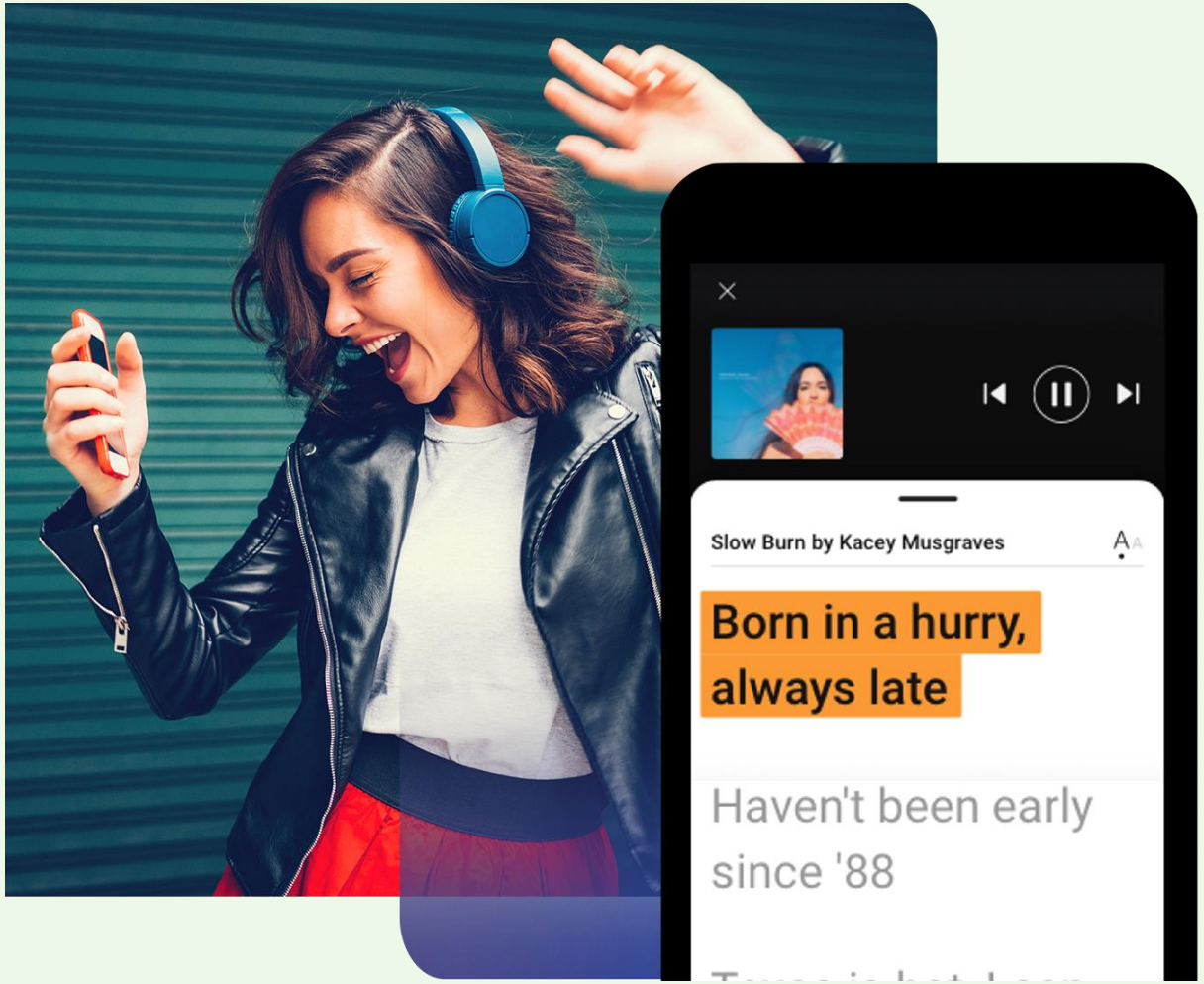
What Can We Learn from Competitors?

Industry Standard Across Music Discovery Platforms like SoundHound, Shazam, and Google's Hum Search have pioneered intuitive music discovery by allowing users to search for songs using humming, singing, or melody recognition.

Shazam

Shazam allows users to identify songs by recording ambient audio, helping users discover music in real time by listening to nearby soundscapes. This has made Shazam a go-to app for live events, cafes, and other spontaneous discovery moments.



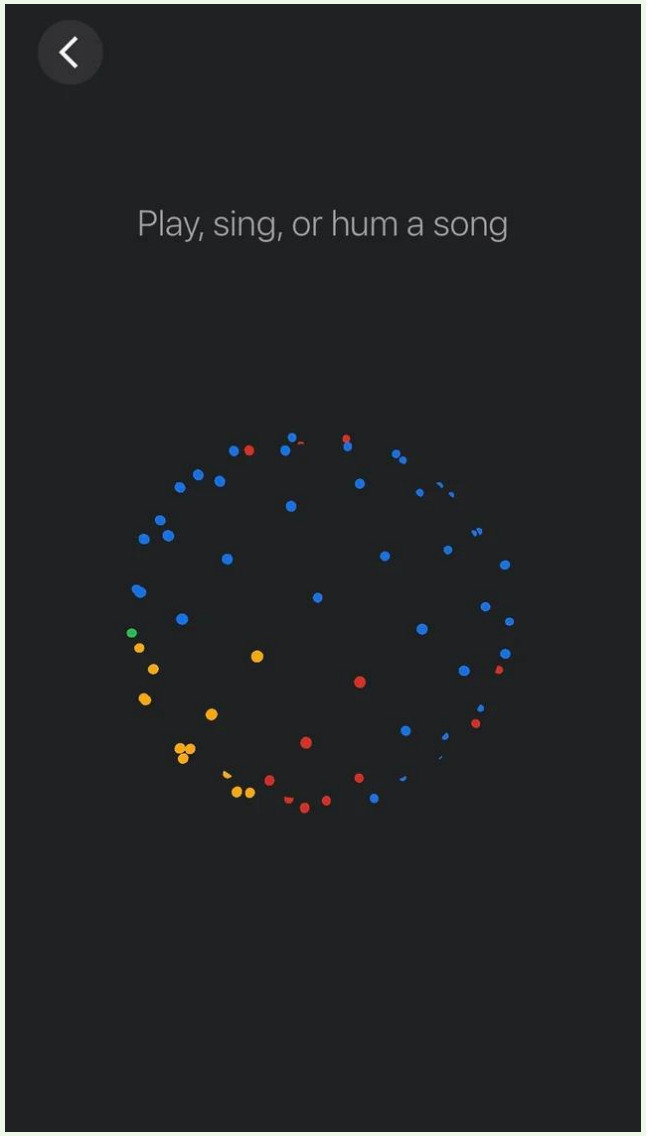


SoundHound

SoundHound enables users to hum or sing a melody directly into the app, instantly identifying the closest match in its database. This feature has created a seamless user experience by addressing the challenge of remembering a melody without knowing the lyrics or song title.

Google Hum Search

Google's Hum to Search provides users the ability to hum a melody into their device using voice search, allowing Google's algorithms to match the sound to a song. This feature has proven effective by offering a frictionless and fast solution for users trying to identify a melody.



AUDIENCE

Who Uses Spotify?

At a high level, *Spotify* serves a diverse user base of **individual listener**s and **content creators** (musicians, podcasters). For this initiative, we are focused specifically on the **individual listener** audience and their music discovery journey.

Individual Spotify Users

Age: Spotify's core demographic is younger users, with **55% of global users aged 18–34**. (Source: IdeaUsher)

Geography: Spotify has over 500 million monthly active users, with a significant presence in the **United States**, **Europe**, and **India**.

Behavior:

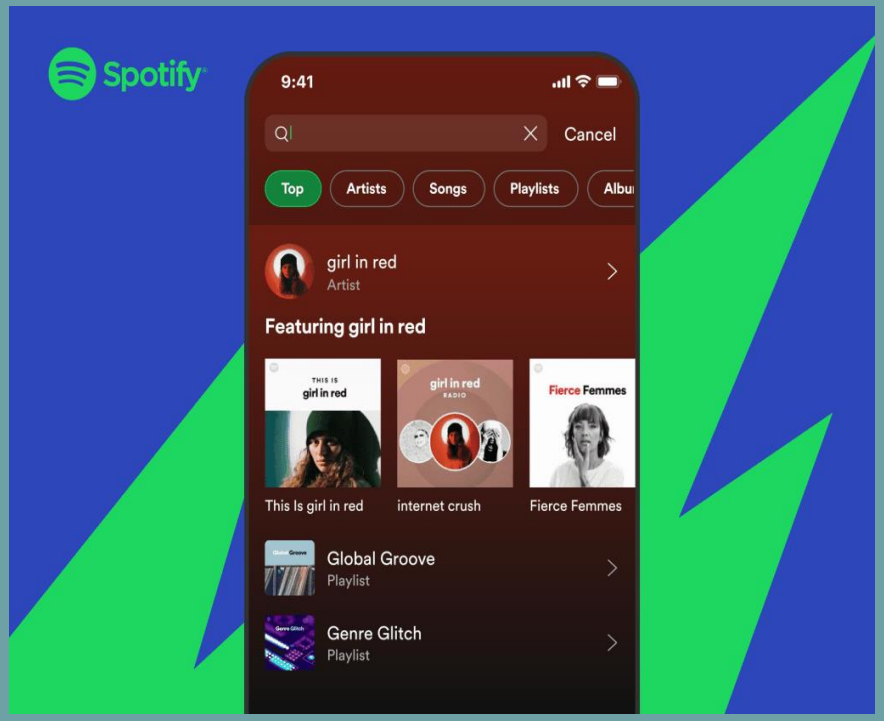
Discovery Frequency: On average, 31% of Spotify users discover new music weekly, either through playlists, algorithms, or recommendations. (Source: Spotify Insights)

Active Listening: Spotify users spend 25 hours per month streaming music on average. (Source: Statista)

Spotify users use the app for:

- Discovering new music through playlists, recommendations, or curated stations.
- Searching for specific songs, artists, or albums.
- Exploring podcasts, radio, and personalized playlists (e.g., Discover Weekly).
- Sharing music socially or saving it for offline use.

Our Target User Segment



For this initiative, we are focused on users who:

Frequently discover new music: This includes casual listeners who struggle to recall song names or want to identify ambient music they encounter.
Use Spotify in dynamic environments: Such as while commuting, dining, or socializing, where identifying a song is often difficult.
Value seamless, innovative search experiences: This includes users familiar with intuitive discovery tools like Google Hum Search or Shazam.

Our ***Hum to Search*** feature will serve all Spotify users globally, but we are prioritizing this audience to ensure the feature is optimized for real-world use cases like recalling melodies or identifying music from their surroundings.

Why This Focus?
Young users, Spotify's largest demographic, are also the most likely to explore new features and expect innovative ways to interact with the app. Solving their music discovery pain points will create ripple effects, helping Spotify attract and retain new users while reinforcing its position as a leader in music streaming innovation.

USER INSIGHTS

How Can Music Discovery Search Be Improved?

Users struggle to find songs when they don't know the name or lyrics

Many users recall only the melody or fragments of a song, making traditional search methods (e.g., typing in a title or artist) ineffective. This gap leaves users frustrated when trying to identify songs they've heard but can't name.

Users desire intuitive discovery of music around them

Listeners often hear songs in public spaces, cafes, or social events but lack the tools to seamlessly identify and add these tracks to their playlists. Current methods, like Shazam, often require switching between apps, disrupting the music-listening experience.

Users want quick and seamless interaction without breaking the listening flow

With Spotify's focus on uninterrupted listening, users want features integrated directly into the app to minimize friction. Switching to external apps for song identification or using vague keyword searches can detract from the overall experience.

USER INSIGHTS

How does a Spotify user identify a song when they only remember the melody?

In its current state, Spotify's search functionality relies heavily on text input such as song titles, artist names, or lyrics. This approach leaves gaps for users who can recall only a melody.

Sam, 26

Scenario: Sam goes to a party and hears an amazing song that matches his vibe. The next day, he tries to recall the song but can only remember melody and a part of the lyrics.

Sam's expectation:

- I can search the lyrics I remember on Spotify
- Should be easy to find the song

1. Sam opens Spotify

"Let me search the lyrics"

2. Sam clicks on the "search" bar

"I don't see an option to search by humming the tune"

3. Sam types part of the lyrics he remembers in search

"None of these results match the song I was looking for"

4. Sam types 'Popular songs 2024'

"No, not any of these! I can't recall any more lyrics"

5. Sam finally remembers the hook and types it in the search bar.

"Omg! This is it.. I wish Spotify had a feature to search by tune."

From this research, we can conclude a couple of things:

1.Spotify excels at personalized playlists and artist-based discovery

2.Competitors have already implemented effective song-identification features, showing user demand and feasibility for such solutions.

3.Discovering songs based on vague recollections or melodies remains a major pain point.

THE PROBLEM

Spotify currently lacks an intuitive way to help users discover music through melody or ambient sound, when traditional text or title-based search methods fail.

THE GOAL

Enhance Spotify's music discovery experience and user retention by introducing a feature that allows users to identify songs through humming, singing, or ambient sound.

FEATURE PRIORITIZATION & MVP DEFINITION

What should be included in the MVP?

To successfully pilot the "Hum to Search" feature on Spotify, the following user stories are required:

User Stories:

As a Spotify user, I want to hum or sing a melody to identify a song, so that I can find the music stuck in my head.
Users need the ability to input a melody or tune via humming or singing, and the app should identify potential song matches with a high degree of accuracy.

As a Spotify user, I want to see a list of song suggestions based on my input, so that I can easily choose the correct song.
After submitting a hum or tune, users need a simple interface displaying possible matches with artist names and song previews to confirm their choice.

As a Spotify user, I want to use this feature in real-time to identify ambient music, so that I can discover songs playing around me.
The feature should include the ability to capture and analyze ambient sounds, offering song matches for background music at events, parties, or public spaces.

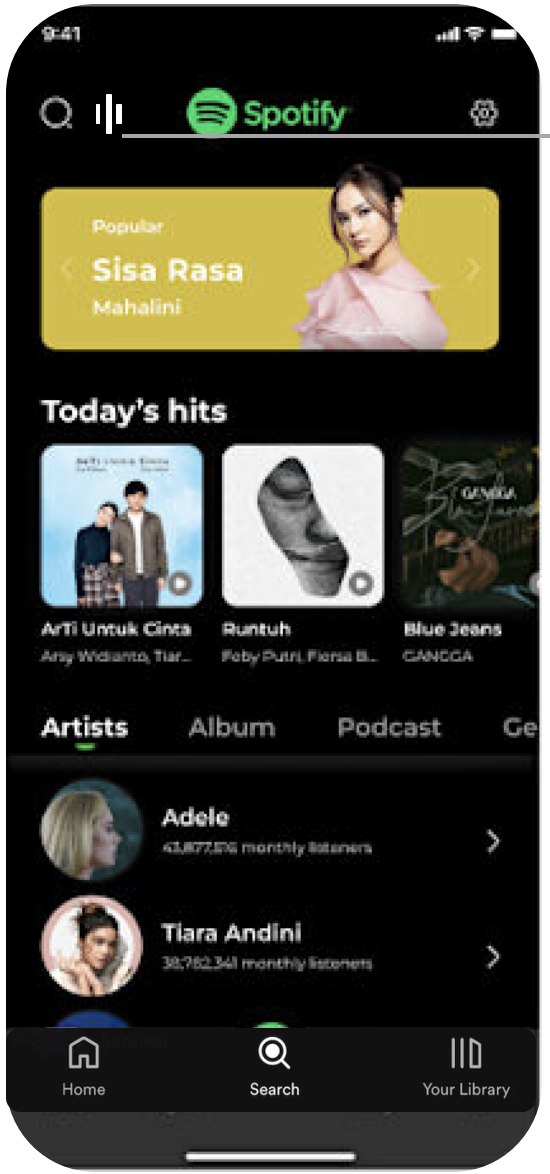
As a Spotify user, I want to save identified songs to my library or playlist, so that I can revisit them later.
Users should have an option to add the identified song directly to a playlist or library for future listening and sharing.

As a Spotify developer, I want to collect feedback on user satisfaction with song matches, so that I can improve the feature's accuracy over time.
Spotify should implement feedback mechanisms allowing users to rate the success of their search, helping refine the algorithm and improve results.

As a Spotify developer, I want the feature to integrate seamlessly into the app's existing search functionality, so that users experience continuity.
The "Hum to Search" tool should appear as part of the primary search interface, ensuring users find it intuitive and accessible without disrupting current search experiences.

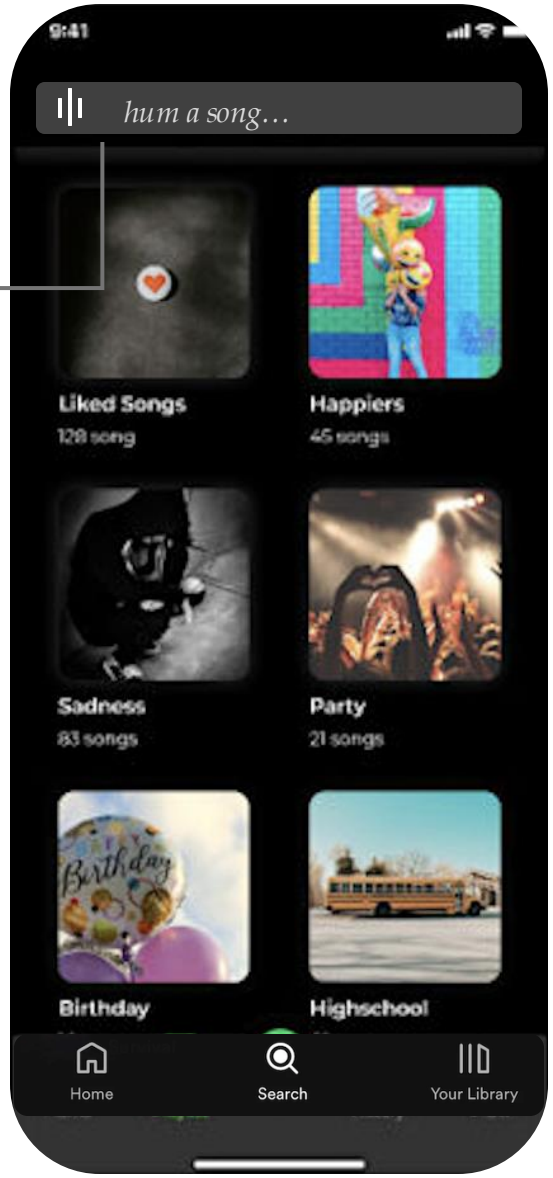
FINAL SOLUTION

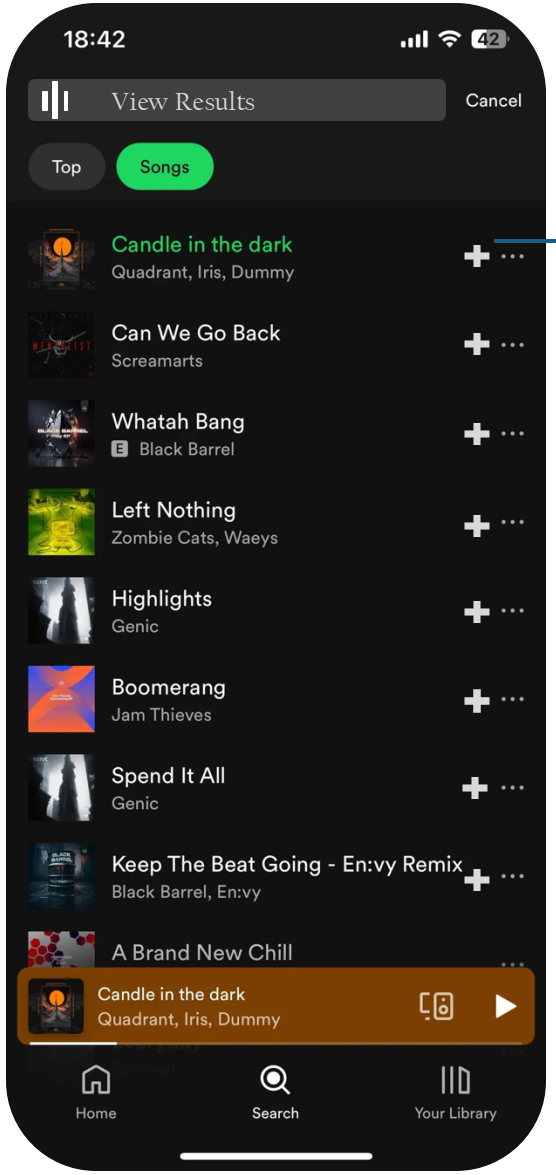
Integrate a feature to listen and detect hums, tunes and ambient music.



Option to search a song by hum, singing, or music playing in your background.

Search bar to listen to your tune and provide results that match





Allows user to add search result to playlists

MEASURING SUCCESS

A/B Test Metrics

NORTH STAR METRIC

Subscription Conversion Rate

If we are solving our user's main pain points, we should see a decrease in the amount of time it takes for users to search a particular song on mind. We track the percentage of users converting from the 30-day free trial to paid subscriptions after trial ends to use this feature.

PRIMARY METRICS

- **Trial Activation Rate:**
  How many free users start using the "Hum to Search" feature during the trial.
- **Average Song Identifications Per User During Trial:**
  Number of songs identified by users within the trial period.
- **Repeat Usage Rate During Trial:**
  Percentage of trial users who use the feature more than once.

ENGAGEMENT METRICS

- **Time to First Feature Use:**
  Time it takes for users to first interact with the feature after trial activation.
- **Subscription Retention Rate:**
  Percentage of converted users who remain subscribed after the first month.

REVENUE METRICS

- **ARPU for Paid Users:**
  Average monthly revenue from users who converted to paid subscriptions.
- **Trial-to-Paid Revenue Uplift:**
  Revenue impact from trial-to-paid conversions compared across variants.

COUNTER METRICS

- **Feature Abandonment Rate:**
  Percentage of trial users who stop using the feature after initial interaction.
- **Impact on Non-Trial Retention**:
  Retention rate of users who do not participate in the trial.
- **Error Rate in Song Identifications:**
  Percentage of failed or inaccurate identifications for trial and paid users.

LAUNCH & GTM STRATEGY

A/B Test Hum to Search

To ensure the successful integration of the "Hum to Search" feature into our app, we will implement an A/B testing strategy to evaluate user engagement and conversion rates.

Versions:

- Control: Current app without the "Hum to Search" feature (Start with 90% of audience).
- Variant: App including the "Hum to Search" feature (Start with 10% of audience).

Audience:

- Free-tier users and premium subscribers.
- Users eligible for a 30-day free trial of the premium tier.
- Geographically focused on English-speaking regions (e.g., the United States, Canada, UK).

Primary Metric:

- Subscription Conversion Rate: Proportion of users transitioning from the free trial to premium subscriptions.

Secondary Metrics:

- Trial Activation Rate: Percentage of free-tier users initiating the free trial after interacting with the feature.
- Average Song Identifications Per User During Trial: Frequency of feature use among trial participants.
- Feature Abandonment Rate: Proportion of users who stop using the feature after their first attempt.

Test Process:

1. **Initial Rollout**: Start the A/B test with 10% of users exposed to the variant.
2. **Iterative Updates**: Analyze data and make iterative improvements to the user experience.
3. **Expanded Rollout**: If positive results are observed (e.g., increased conversions, reduced abandonment), expand the test to include 50% of the eligible audience.

Expansion Plan:

- Following a successful rollout in the initial region, expand availability to non-English speaking markets.
- Implement localized improvements based on regional user feedback and performance data.

Contingency Plan:

If A/B test results are negative (e.g., low conversion rates, high abandonment rates), investigate user feedback, iterate on the design or functionality, and rerun the experiment before proceeding to a larger rollout.
This phased approach allows us to validate the feature's impact, refine it based on real-world usage, and maximize both user satisfaction and revenue potential.

SUMMARY

To recap, I'd recommend A/B testing the MVP of the "Hum to Search" feature with the goal of increasing user engagement by reducing the time users spend identifying songs and improving their overall experience.

This MVP aims to address the key pain points users in our target demographic encounter when trying to recall or search for music, particularly by creating a seamless and intuitive way to identify songs through humming.

If the A/B test returns positive results, I'd recommend scaling this feature by expanding it to additional regions, enhancing the user experience. Over time, this could improve subscription conversions, trial activations, and engagement metrics.

Thank you for exploring this case study!