

# CASE STUDY



## Problem Statement & Objective

## User Personna

## Solution Architecture

## Innovation and Feasibility

## Impact and Benefits

## References

### PROBLEM STATEMENT



Playlists **don't adapt** to mood or themes in real-time



Users want **more immersive** and fun music experience



No tool exists for DJ with most popular song segments.



Static playlists **fail to engage** users in dynamic scenarios

**626 MILLION**  
ACTIVE USERS



**246 MILLION**  
PREMIUM SUBSCRIBERS

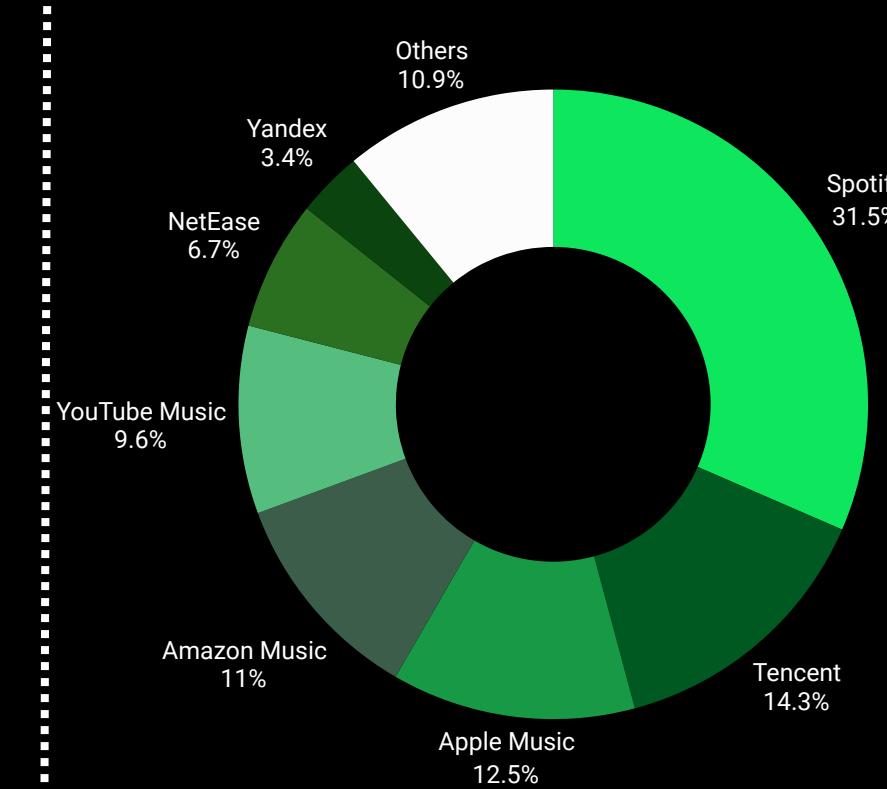
**13.24 BILLION**  
EUROS IN REVENUE

**11 MILLION**  
ARTISTS

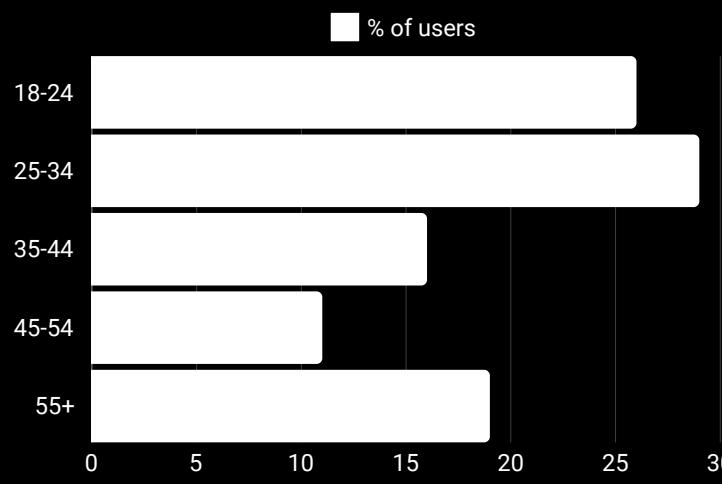
**Spotify**

**100 MILLION**  
SONGS

- Along with massive reach, Artists can also track song performance data making it their top choice
- Unique feature allowing multiple users to create and edit shared playlists in real-time.
- Personalized annual summaries of listening habits, a highly engaging and shareable feature that drives user retention.



### AGEWISE SPLIT OF SPOTIFY USERS



- Millennials and Generation Z make up over 57% of Spotify's users
- Gen Z uses Spotify to create and strengthen **personal connections**, and to soundtrack important life moments
- Incorporating **AI DJ feature** will definitely be a big appealing feature to their major targeted audience which happens to be Gen Z and Millennials

### COMPETITIVE ANALYSIS

#### Limited Customization in Existing AI DJ Tools

Current free AI DJ tools require users to select song parts manually, focusing mainly on merging tracks rather than offering personalized suggestions. This limits creativity and ease of use.

#### Personalization as a Differentiator

Many platforms lack customization options. Allowing users to modify the flow (tempo, transitions, etc.) gives them more control over their mixes, offering a balance of ease and customization without complex DJ skills.

#### Opportunity for Hassle Free Experience

Most tools need manual input; by training AI to identify popular song parts for seamless mixing, users can enjoy a smoother, more intuitive experience without selecting individual sections.

#### Advanced AI Mixing Techniques

Instead of just merging songs, AI can create professional-quality transitions (beatmatching, looping, etc.), making mixes sound polished while requiring less user input.

### MARKET SHARE OF VARIOUS STREAMING PLATFORMS

- 
- I'm throwing a party, but I don't want to keep skipping songs and hiring a DJ is such a hassle!
- CONVERSATION
- Right? Imagine if an app could just mix the best parts of songs automatically. None of these platforms even do that yet!
- None of the major streaming platforms, despite their market dominance, currently offer an AI-driven DJ feature.
  - They all rely on static playlists that lack the ability to dynamically adapt to user moods, themes, or popular song segments.

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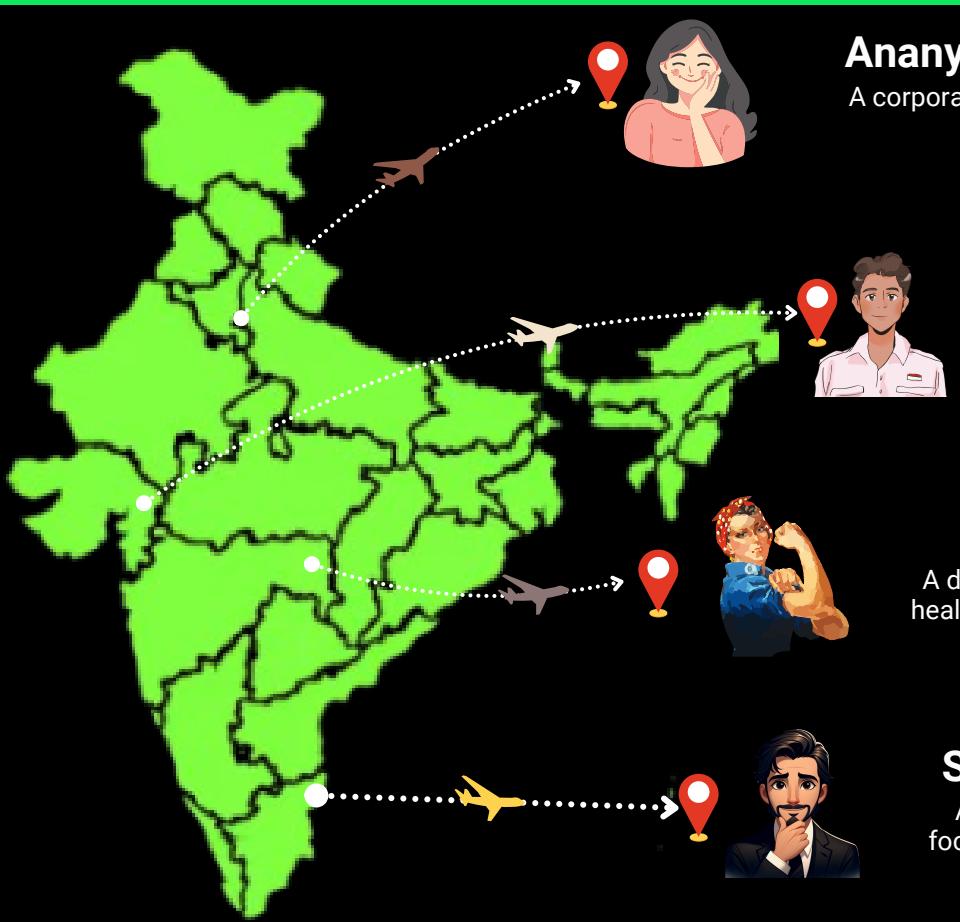
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### CONSUMER PERSONA



#### Ananya, 25 (The Social Butterfly)

A corporate professional who loves hosting vibrant weekend parties for his friends.

#### Ayush, 18 (Casual Listeners)

A college student who enjoys listening to music while relaxing or scrolling through social media after classes.

#### Khushi, 32 (Fitness Freak)

A dedicated fitness enthusiast pursuing holistic health and peak performance through disciplined, strategic self-improvement.

#### Sameer, 45 (Multitaskers)

A product manager who listens to music to focus while managing projects and deadlines in his bustling workspace.

### CUSTOMER PAIN POINTS

Persona	Demographics	Psychographics	Pain Points
Ananya (The Social Butterfly)	Age: 25 Gender: Female Occupation: Marketing Location: Delhi	• Extroverted and Socially active. • Values experiences & connections • Tech-savvy & Trend-Conscious • Enjoy Hosting parties & gatherings	• Difficulty curating ideal playlists for social events • Spends too much time managing party music. • Wants to discover new music but lacks time to search.
Ayush (Casual Listeners)	Age: 18 Gender: Male Occupation: Student Location: Ahmedabad	• Laid-Back and easy-going. • Values simplicity & familiarity • Enjoys wide range of music genres • Tech-enthusiast & loves options	• Overwhelmed by the music library and features • Struggles to find music that matches his taste • Wants to enjoy parts of songs and quickly switch to the next one without playing the entire track.
Sameer (Multitaskers)	Age: 45 Gender: Male Occupation: Product M. Location: Chennai	• Career driven and ambitious • Time constrained and stressed • Values efficiency and quality • Appreciates sophisticated music's	• Limited time to discover music or make playlists. • Needs music for focus and stress relief at work. • Desires a seamless music experience across devices and locations
Khushi (Fitness Freak)	Age: 32 Gender: Female Occupation: Trainer Location: Nagpur	• Health-conscious and disciplined • Goal-oriented and competitive • Values efficiency and productivity • Passionate about fitness	• Struggles to match music with workout intensity • Needs playlist updates for motivation • Wants personalized music recommendations for different types of workouts

### CATEGORY

### PAIN POINT

### MoSCoW

### Reason

	Playlist Curation	Users often spend <b>too much time curating playlists</b> for social events, which can detract from their enjoyment and hosting duties.	Must Have	Simplifying playlist curation boosts enjoyment, atmosphere, efficiency, & spontaneity, letting hosts <b>focus on guests and memorable moments</b> .
	Music Discovery	Time constraints hinder music lovers from discovering <b>new tracks</b> matching their evolving tastes.	Must Have	Fundamental to crafting a tailored, immersive experience a cornerstone of Spotify's <b>unique value proposition</b> and user engagement approach.
	Personalization	Users struggle finding music <b>matching their tastes</b> , moods, and contexts, reducing enjoyment and risking platform disengagement.	Must Have	Critical for <b>user engagement and retention</b> in a competitive streaming market, personalization algorithms and content curation are indispensable.
	Music Playback	Users want to play <b>song snippets and quickly skip tracks</b> , enhancing music discovery and creating dynamic playlists for parties or workouts.	Should Have	This feature enhances user control but isn't essential. It could differentiate Spotify and appeal to users <b>seeking customizable experiences</b> .
	Work Integration	Demand for focus-enhancing, stress-reducing <b>workplace music</b> rises as employees recognize its productivity and mental health benefits.	Could Have	Addressing workplace audio needs could expand Spotify's appeal, positioning it as a <b>productivity tool</b> and broadening its market.
	Cross-device Experience	Users want their music preferences and history to sync across devices, ensuring <b>consistent listening everywhere</b> .	Should Have	Critical for <b>user retention, engagement, and competing effectively</b> in the dynamic and evolving modern streaming landscape.

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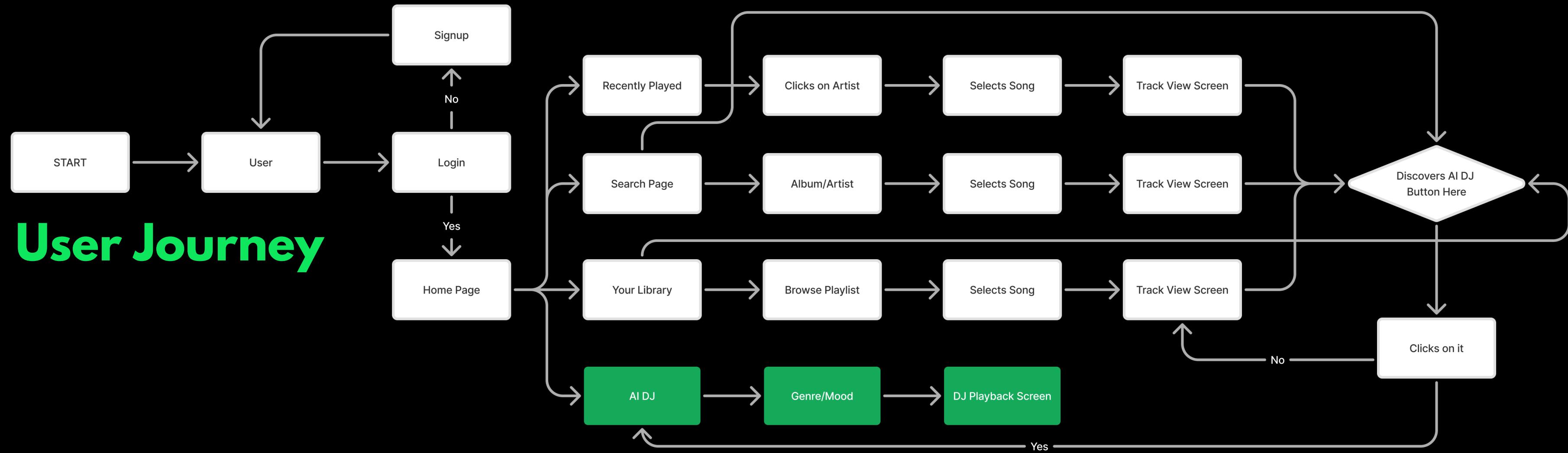
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## Spotify AI DJ Experience Navigation

### AI DJ Experience Enhancement



Mood , Genre, Tempo selection interface

Voice command integration



### Track View Screen Additions



Lyrics overlay option

Share DJ mix functionality

### User Library Integration



Custom mix templates

Favorite transitions collection

### Social Sharing Feature



Share DJ sessions with friends

Collaborative DJ sessions

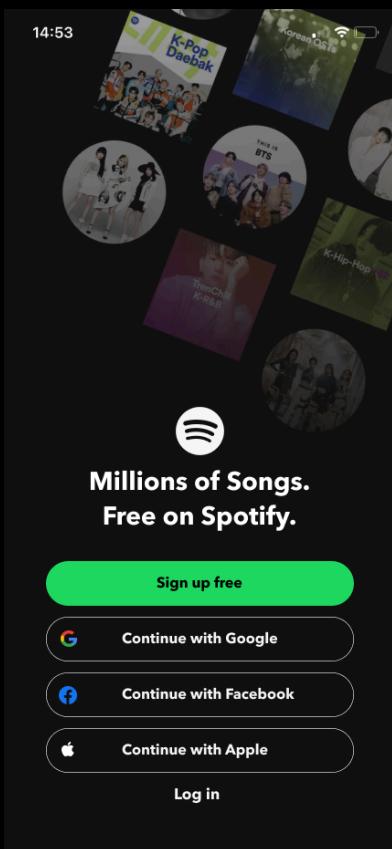
### Interactive Music Creation Hub



Cultural event templates

Personal mixing studio with AI-assisted transitions

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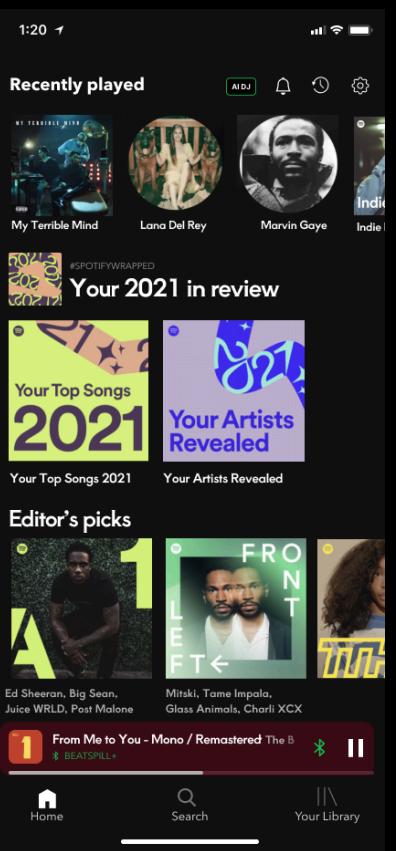
### 1. Landing Page

The Spotify landing page has no changes as such from usual spotify app, Text - "Millions of Songs. Free on Spotify" with 4 login options: Sign up free, Google, Facebook, and Apple, against a K-pop playlist background.

## User Personna

### 2. Sign up Page

The below page features a simple account creation form with name field, Terms of Use links, and optional marketing preferences toggles. Clean interface with "Create an account" button.

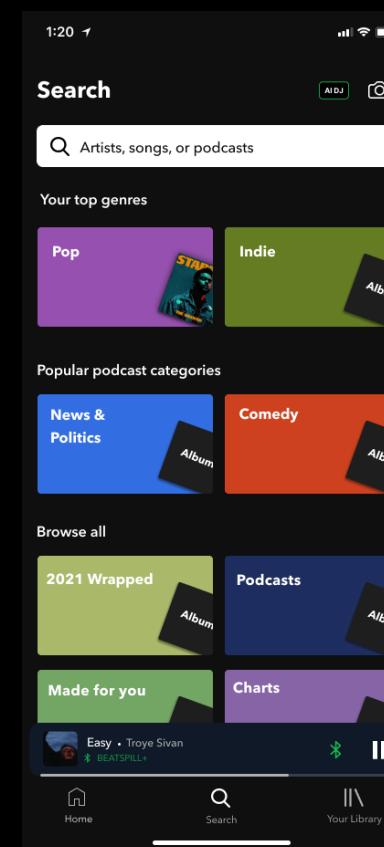


## Solution Architecture

### 3. Home Page

The above page features a distinctive AI DJ button on top right, alongside notification and settings icons. The layout includes Recently Played artists, 2021 Year in Review cards, and Editor's Picks, with essential navigation at bottom.

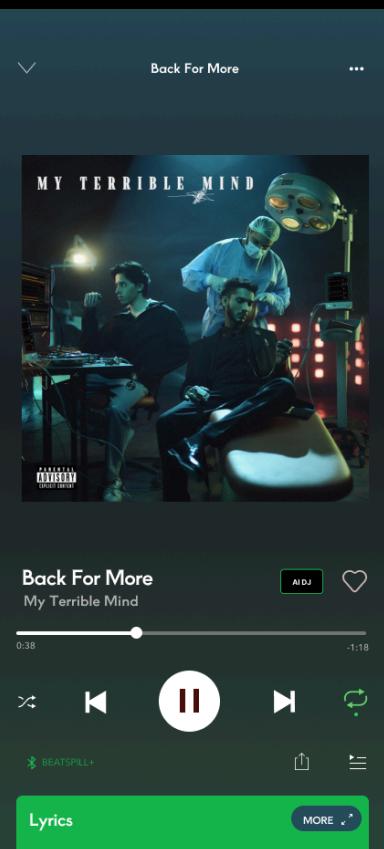
The below page features a search bar with AI DJ and camera buttons, displaying genre categories (Pop, Indie), podcast sections (News & Politics, Comedy), and browsing options like 2021 Wrapped and Charts



## Innovation and Feasibility

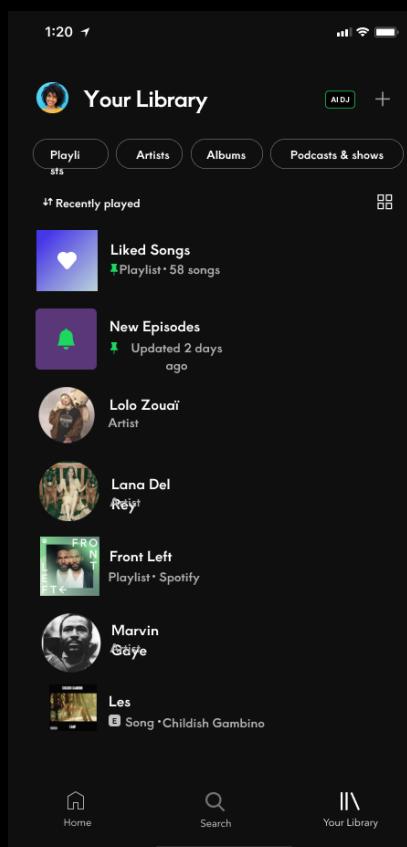
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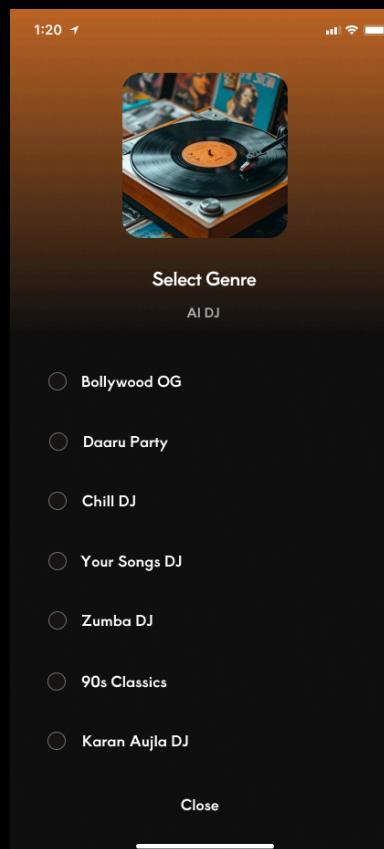


### 6. Your Library Page

Features user profile, AI DJ button, and content filters (Playlists, Artists, Albums, Podcasts). Displays "Liked Songs" playlist with 58 tracks, New Episodes section, and recently played artists including Lolo Zouaï and Lana Del Rey.



## Impact and Benefits



### 7. AI DJ Genre Selection

Features a vintage turntable icon and seven curated DJ modes: Bollywood OG, Daaru Party, Chill DJ, Your Songs DJ, Zumba DJ, 90s Classics, and Karan Aujla DJ. Clean interface with radio-button selection and close option at bottom.

### 8. AI DJ Playback

Showcases "Bollywood OG" genre DJ being played with vintage turntable imagery, playback controls, and progress bar. Features shuffle, previous/next track buttons, and a clean minimalist interface against an orange gradient background.



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### INNOVATION

#### Mood-based Mixing with Dynamic Adaptation

Employs real-time song transitions based on detected mood shifts, offers customizable mood presets for instant ambience setting, and utilizes advanced audio analysis and machine learning for seamless mood detection and mixing.

#### Artist DNA Blending

Creates unique mixes by analyzing and combining musical elements from multiple artists, simulates never-before-heard collaborations, and offers users novel listening experiences beyond traditional playlists.

#### Viral Snippet Mashups

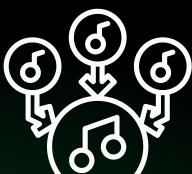
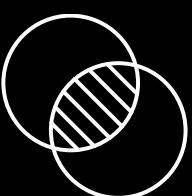
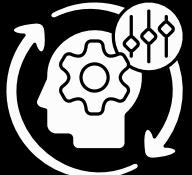
Identifies and mixes the most replayed segments of trending songs, creates unique remixes using popular hooks and choruses, and integrates with social media platforms for easy sharing, increasing user engagement.

#### User as DJ with AI Assistance

Empowers users to create their own AI-assisted mixes, provides intelligent suggestions for complementary tracks and optimal transition points, and allows saving and sharing of user-created DJ sets, fostering a community of creators.

#### Harmonic Mixing with Musical Intelligence

Analyzes songs' musical keys and structures for smooth transitions, offers options for gradual key changes or genre shifts within a mix, and elevates the listening experience by ensuring musical coherence across diverse tracks.



## AI DJ: The Perfect Balance

### Desirability

- Personalized music curation
- Dynamic adaptation to moods & themes
- Enhanced party & workout experiences
- Real-time playlist evolution

### Viability + Desirability

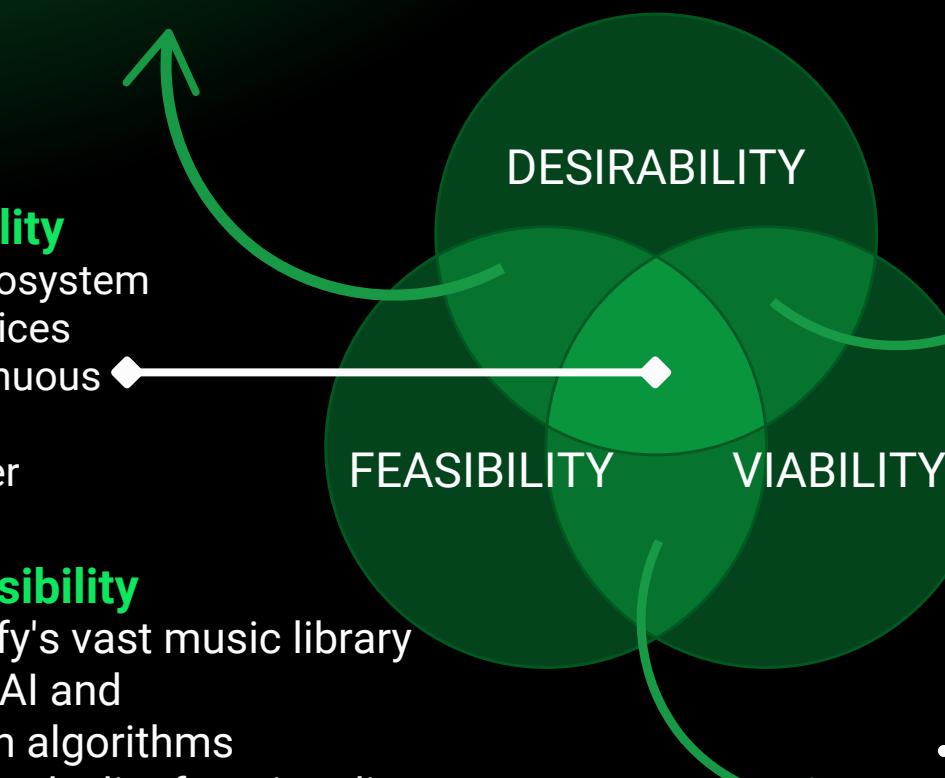
- Exclusive AI DJ experiences for premium users
- Branded AI DJ sessions with popular artists
- Cultural and seasonal themed playlists

### Viability

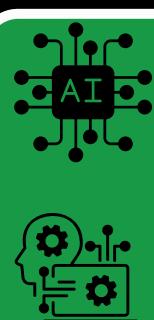
- Potential for premium tier upsell
- Increased user engagement and retention
- New advertising opportunities
- Data insights for artists and labels

### Feasibility + Viability

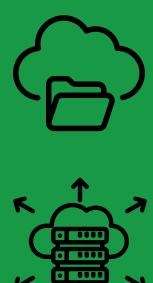
- Gradual feature rollout to manage costs
- Utilization of cloud computing for processing
- Compliance with existing licensing agreements



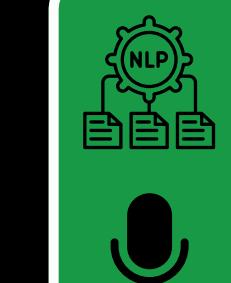
## TECHNOLOGICAL FEASIBILITY



Implement advanced algorithms for personalized music curation, combining collaborative filtering and NLP for preference analysis and contextual commentary.



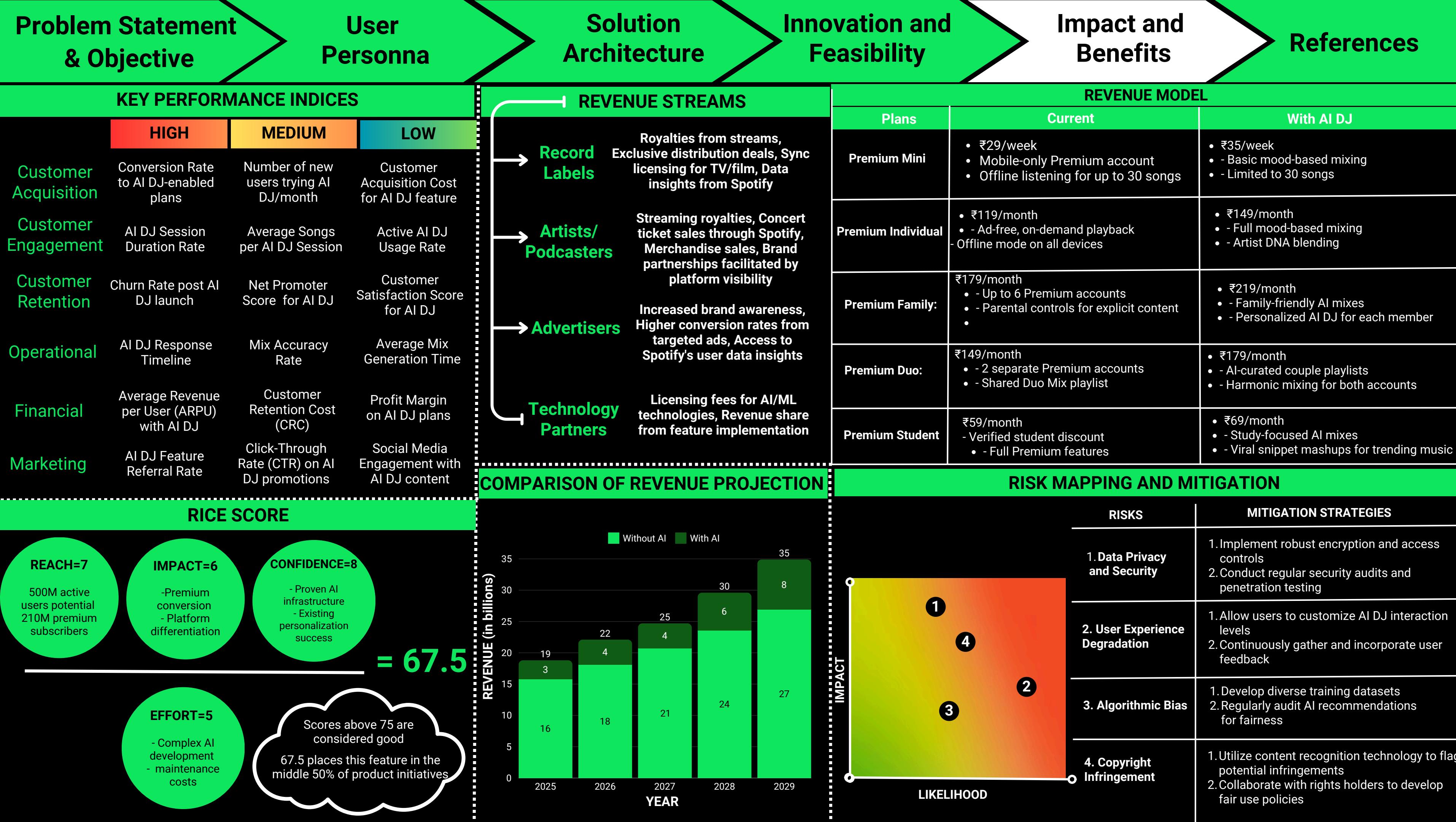
Develop a robust cloud-based system to handle real-time processing of vast music libraries, simultaneous user requests, and efficient data storage for user preferences and listening history.



Utilize cutting-edge voice synthesis technology, like Sonantic, to create a lifelike AI DJ voice, combined with natural language generation for contextual and engaging commentary on music selections.



Instagram uses algorithms to suggest impactful song segments for user stories, while YouTube emphasizes the most viewed video parts to engage viewers effectively.





# Thank You

We appreciate your time and consideration.

References