Team Blue - CS410

VibeQueue

Your Vibes, Managed – The Modern Jukebox for Local Spaces

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Team Bio

Lucas Hayes

Lucas is a Senior at ODU majoring in Computer Science. He likes to read and listen to music.

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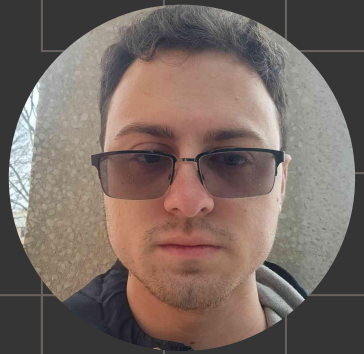
Alanna is a Senior at ODU, majoring in Computer Science and Cybersecurity. She likes to try new foods and travel.



Spencer Hall

Spencer is a senior at ODU who is majoring in Computer Science. He likes to play games and watch sports.

Team Bio

Andrew Behre

Andrew Behre is a Junior at ODU who is majoring in Computer Science. He is a barista on campus and likes to skateboard.

Bea Eggleston

Bea Eggleston is a senior at ODU and is majoring in Computer Science. She enjoys programming and making art for games.

Dominick Rodriguez

Dominick Rodriguez is a Junior ODU majoring in Computer Science. He likes to read and listen to music.

Societal Problem

In the modern hospitality industry, atmosphere is everything. However, small cafes and local restaurants face a major hurdle, managing their background music. Currently, business owners are stuck between a few options, but all of these options have major drawbacks: some are bulky and costly to maintain, while others offer no customization of songs. For staff, manual song requests are also a tedious distraction during busy rushes. For owners, the lack of a controlled, affordable, and legal way to let customers interact with the music means missing out on both customer engagement and a secondary revenue stream.

Who is affected

Our potential customer base and those who are impacted by this problem

1

Users

Users (consumers, shoppers) do not have access or the ability to play their favorite songs in their local haunts. Gyms are a perfect example.

2

Customers

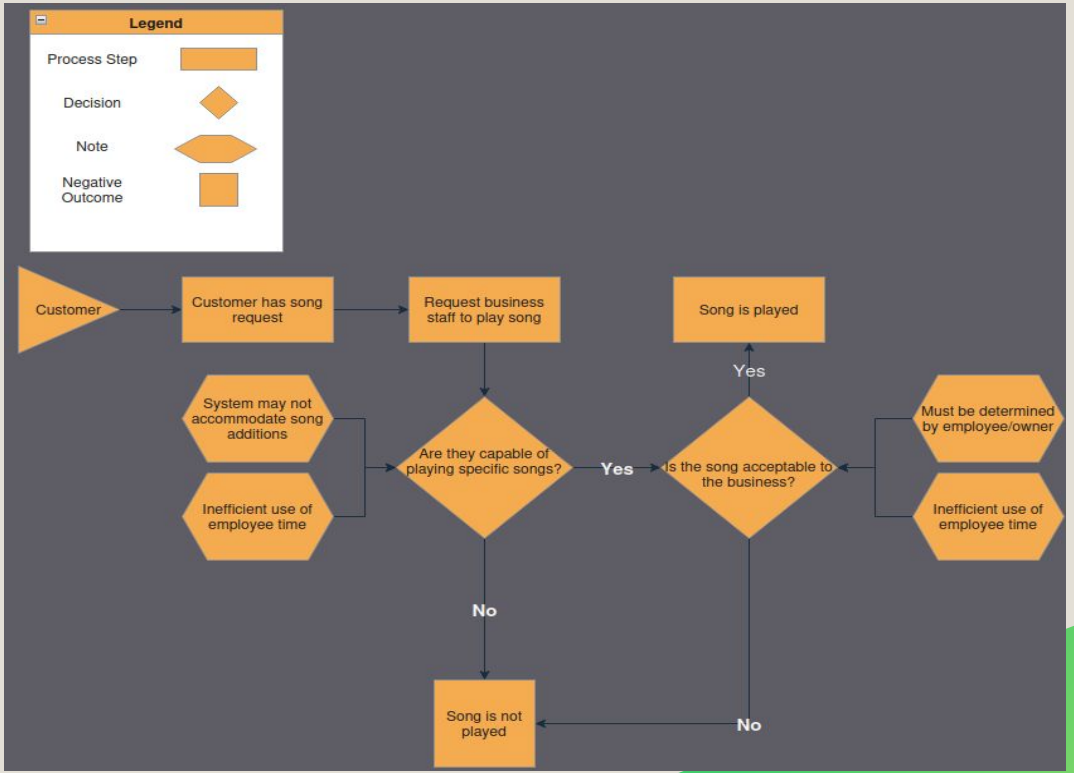
Customers (businesses) usually rely on a simple setup and a playlist. Adding song requests to the queue may not be possible for them (or tedious).

3

Stakeholders

Stakeholders are artists, record labels, and music platforms (iTunes, Spotify, etc.)

Current Process Flow



VibeQueue (Elevator Pitch)

Imagine walking into your favorite local coffee shop, scanning a QR code on your table, and instantly being able to influence the vibe of the room. VibeQueue is a software-based solution that replaces expensive hardware with a seamless digital ecosystem. By connecting the Spotify API with Soundmachine, we provide a fully licensed, legal, and interactive music experience for small businesses.

The Solution

VibeQueue is a web-based ecosystem that automates the music selection process for local businesses. By providing a digital interface for customers to browse and request songs via QR codes, VibeQueue eliminates the need for manual staff intervention and proprietary hardware. Unlike established competitors that require expensive physical consoles, VibeQueue leverages a software-only integration of the Spotify API and Soundmachine, offering a low-cost, fully licensed, and interactive "Vibe Management" tool tailored specifically for small-scale local spaces.

Automated Interaction (The "No-Staff" Gap)

Direct-to-consumer web interface allows for song requests without interrupting staff, resolving the "social friction" gap.

Hardware-Agnostic Deployment (The "Cost" Gap)

A software-only solution that runs on existing business devices (tablets/phones), removing the need for the expensive proprietary hardware required by TouchTunes or Rockbot.

Dynamic Vibe Moderation (The "Control" Gap)

Integrated filters and a "Business Control Center" allow owners to set genre limits and block explicit content automatically, ensuring the audio matches the establishment’s brand.

VibeQueue Process Flow

System Activation

Business launches VibeQueue on any web device connected to speakers

Customer Check-in

Customer scans tableside QR code opening the Web App instantly

Interactive Selection

Customer searches licensed library and submits a request

Automated Validation

Logic engine compares song against the store's set "vibe" genre and Soundmachine license

Dynamic Queuing

Song is automatically inserted into queue

Goal: Seamless Atmosphere

The "vibe" is managed automatically allowing staff to focus on other duties

Competition Matrix

	VibeQueue	TouchTunes	Rockbot
Project Stage	Prototype	Mature commercial product	Established commercial product
Target Market	Small local business	Large bars & restaurants	Medium/large business
Hardware Equipment	No hardware	Proprietary jukebox required	Dedicated hardware recommended
Cost to Business	Low Cost	High upfront cost	Medium Cost
Best Use Case	Budget friendly/ Interactive spaces	High traffic venues	Curated Background Music

Development Tools

Communication objectives

A brief description of the key performance indicator (KPI)

Goal: 00%

A brief description of the key performance indicator (KPI)

Goal: 00%

Marketing objectives

A brief description of the key performance indicator (KPI)

Goal: 00%

A brief description of the key performance indicator (KPI)

Goal: 00%

Business objectives

A brief description of the key performance indicator (KPI)

Goal: 00%

A brief description of the key performance indicator (KPI)

Goal: 00%

Major Functional Components

What software will be used (LAMP) to facilitate this project

1

Objective title

Marketing goals might include: reaching new audiences, generating new leads and sales, or strengthening existing customer relationships.

2

Objective title

Marketing goals might include: reaching new audiences, generating new leads and sales, or strengthening existing customer relationships.

3

Objective title

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4

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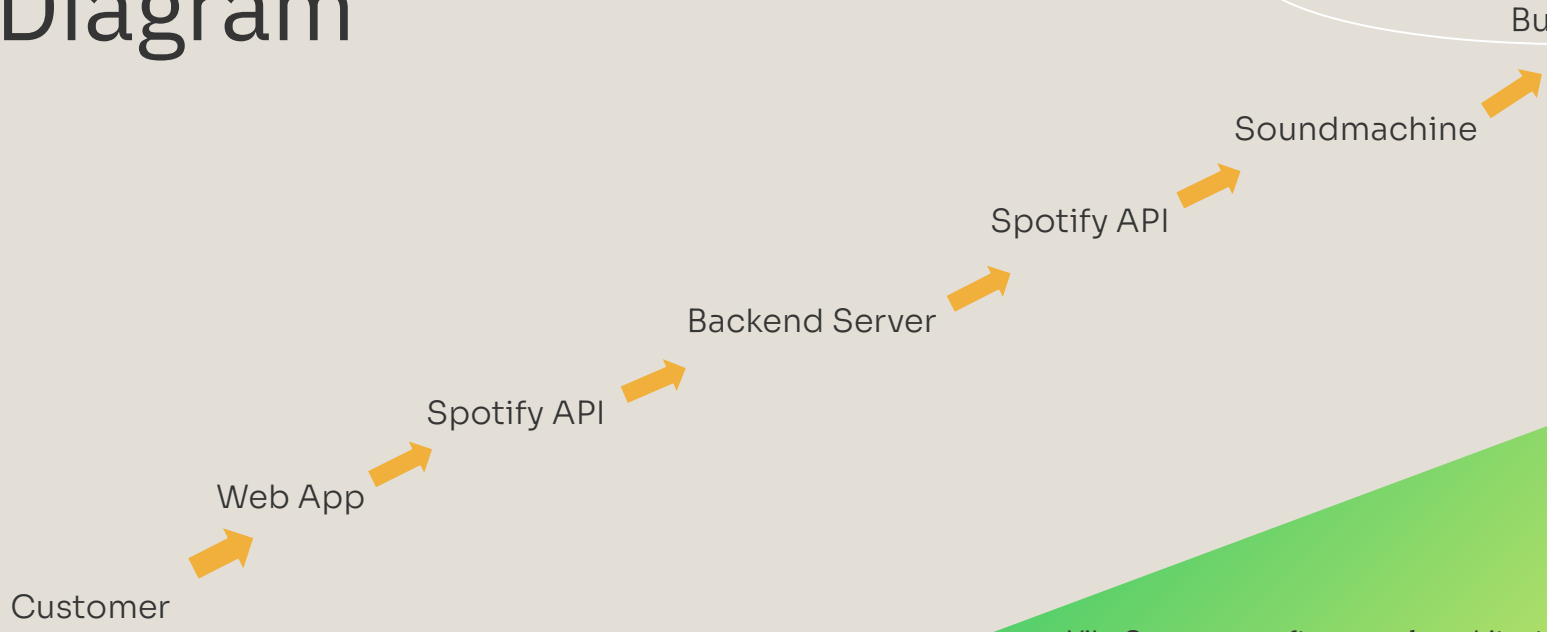
System Architecture Diagram



VibeQue uses a software-only architecture integrating licensed music APIs with existing business audio systems.

Risks

#	Challenge	Response
1	TouchTunes is an established giant in this field	TouchTunes is designed for larger locations with higher budgets and resources. VibeQueue is intended for small businesses with minimal budget to spend on their music
2	Rockbot is an established company in this field	Rockbot lacks the convenience of a webapp and the customer facing aspects that are present in both TouchTunes and VibeQueue
3	Users selecting a song that doesn't fit the "vibe" of the shop	Staff at the shop will be able to utilize a "control center" which will allow them to limit or otherwise control the songs played at the location

Risk Matrix

Likelihood	Med	High	Critical
	Low	Med	High
	Low	Low	Med
	Impact		

Risk Assessment

Risk Factor	Likelihood	Impact	Strategy
Competition (TouchTunes)	High	Medium	Target a different market (small businesses)
Competition(Rockbot)	Medium	Medium	Focus on user convenience
Brand Control	Low	High	Control center to protect the “vibe”

Problem Solution Mapping

Market Problem	Our Solution	Feature
Barrier to Enter: Commercial systems have a higher price than is feasible for many small businesses	System designed for small business groups operating on a more limited budget	Small subscription
Limited User Experience: Rockbot has limited mobile access or is slower than customers want to use	Accessibility: Modern web-app architecture allows for ease of customer use and high speed	Web-App
Atmospheric Clash: Owners may be concerned that customers will play a song that doesn't fit	Admin Control: Owners have a dashboard that allows them to restrict or manipulate the qualities of the songs chosen	Control Center

Glossary and References

TouchTunes. (n.d.). *About us: Our story.* https://www.touchtunes.com/about/our-story

Rockbot. (n.d.). *Smarter music for your business.* https://rockbot.com/go