



Search



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Library



Our Music Playlists

Jukebot



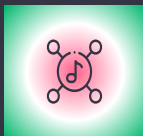
Turn Your Thoughts into Perfect Spotify Playlists.





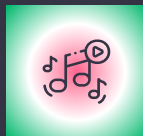
The Current Problem

There is currently no strong solution that leverages AI to quickly create a customized playlist for spotify users that matches your mood and music preferences in the moment.



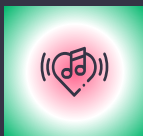
Genre

Rock, Pop, Hip-Hop, Jazz, Country, Classical, etc



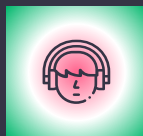
Vibes

Chill, Relaxing, Sad, Hype, Upbeat, Happy, etc



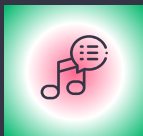
Subject

Love, Breakups, Moving On, Empowerment, etc



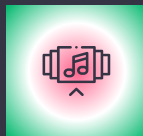
Artists

Taylor Swift, The Beatles, Drake, Tim McGraw, etc



Context

Party/Club, Study/Focus, Road Trip, Workout, etc



Time Period

70s, 80s, 90s, 2000s, etc

A lot of people have
this problem too!!!!

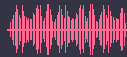


Problem Solved with JukeBot!



Prompt JukeBot with a description of the kind of music you're in the mood for, and it will curate a personalized link to a spotify playlist just for you.

Hey JukeBot! Can you make me a playlist of pop songs that have a chill vibe, and include some Taylor Swift songs?



#	Title	Artist
1	the 1	Taylor Swift
2	Lego House	Ed Sheeran
3	Packing It Up	Gracie Abrams
4	Dear Reader	Taylor Swift
5	This Town	Niall Horan
6	evermore	Taylor Swift
...		



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Our Music Playlists



Time to meet
our friend
JukeBot!





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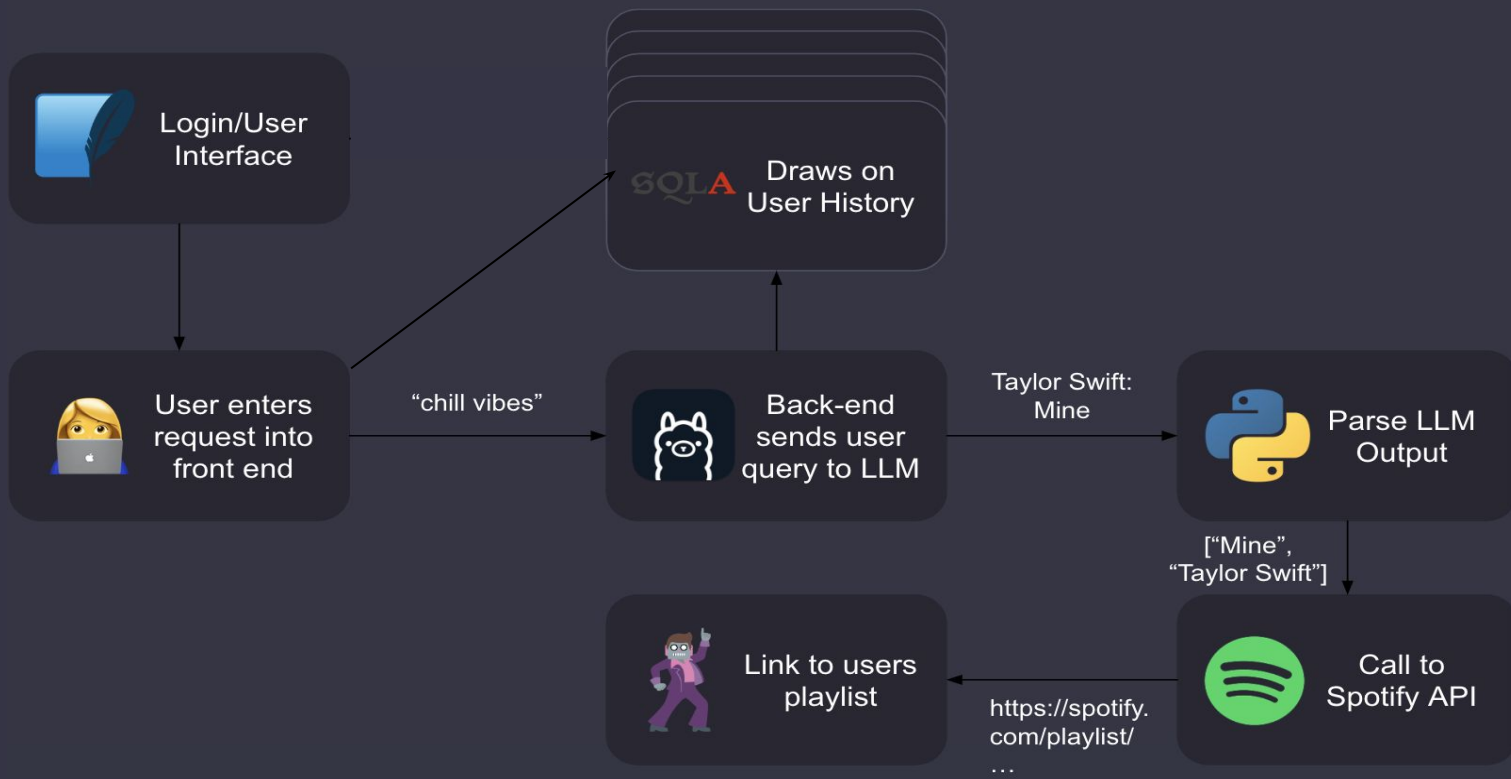
JukeBot

Demo Time!

A look at JukeBot...



System Diagram





Login and User Interface



Create

Follow

Create an account with a username and password, saved in a SQLite database along with time created using password hashing for security purposes.

Login

Follow

When you arrive at the website it will first direct you to our login page, where you can login or navigate to create an account.

Guest

Follow

If you do not want to login or create an account, there is an option to continue as a guest, however this limits the capabilities to show past history.

User History and Cookies

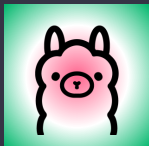
- All user history is stored using SQLAlchemy
 - Guest information is stored using a cookie UUID
 - Account user history is stored using login details

<code>message_id</code>	<code>user_id</code>	<code>message</code>	<code>role</code>	<code>session_id</code>	<code>created_at</code>
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Features:

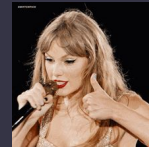
- Display chat
- Tracked sessions
- Remembers preferences

Ollama



The **Llama 3.2** LLM model is integrated with JukeBot to provide users with a conversational AI experience.

- User input + some behind the scenes additions to the prompt is sent to the Llama 3.2 model, and the model's response is used to construct the playlist.
- We have abstracted away much of the model's response so the user is consistently given a specific playlist as the response.
- The user can still “converse” with JukeBot in an intuitive way, for example:
 - “Can you add some Taylor Swift songs?”, “I don’t like Maroon 5.”
- JukeBot keeps track of users’ history when using the Llama model:
 - If you asked about Taylor Swift in the past, then ask for a pop song playlist, it is likely to include Taylor Swift songs.



Parser

The parser **receives the LLM output** and **parses** it into a list of songs and their respective artists for Spotify's API to add into the playlist.

Challenge : Inconsistent output format from LLM

Solution : Clever prompt engineering

Input

```
Playlist Title: Cozy Night  
Keshi: say,  
Rex Orange County: sunflower,  
Lana Del Rey: video games,
```

Output

```
{'playlist_title': 'cozy night',  
'songs': [('keshi', 'say'),  
( 'rex orange county' 'sunflower'),  
( 'lana del ray', 'video games')]}
```

Spotify API

1. Obtain playlist title and song list from parser
2. Authenticate user if needed
3. Make API calls to:
 - a. Create the playlist
 - b. Query each song and grab its Spotify URI
 - c. Use the URIs to add songs to the playlist
4. Return a link to the completed playlist!



Front End

- Fetch and display chat history, generated playlists
- Display playlists in a way similar to how Spotify does for cohesion
- Users can prompt the model to regenerate the playlist
- Clicking on the playlist leads to the Spotify website version



Svelte 5



Spotify
Playlist

Before JukeBot...



...After JukeBot!



Invest in JukeBot now , and you too can easily bring more fun, more music, and more smiles into your life!



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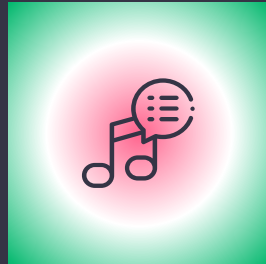
Our Music Playlists

Thank You!



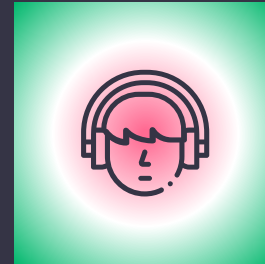


Problem and User Story Updates



Problem

Has not changed: Still striving to provide an AI powered solution to easily create customized playlists to fit any mood.



User Story

Still relatively the same: A user desires a certain playlist vibe, and can describe it to JukeBot and have the playlist easily created. However, Spotify users only.



Changes in Jukebot's Feature Set



History and Memory



User streaming history is not accessible through Spotify API. We have instead decided to **implement user accounts to remember chat history** and personalize recommendations

Dynamic chat updates



Since we are implementing chat history, users are able to add playlist specifications **dynamically** and “converse” with Jukebot until the playlist is perfect

Platform Integration



Spotify has the most subscribers among the top streaming platforms. We have thus decided to scope down our product to **only integrate with Spotify**



Reach Goals



01

Integrate With More Platforms

Automatically sync to Apple Music, Spotify, YouTube, etc.

Push more music to all platforms using a single interface

02

Context-Aware Recommendations

Integrate with existing recommendation algorithms to create personalized playlists that match the user's current mood

03

Multimedia Prompting

Enable users to upload audio files, videos, and images to create multimedia prompts that can't be conveyed in words



Updated Reach Goals



01

Manual Playlist Editing on Site

Allow for more user control of playlists without having to leave the JukeBot site

02

Improve Database & Authentication

Using Firebase rather than SQLite (for registered users)

03

Improved Site and Database Security

Ensure data security against most basic attack vectors so that data cannot be viewed/modified without permission

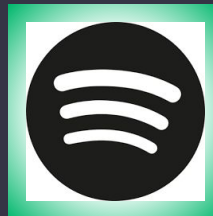
Tools



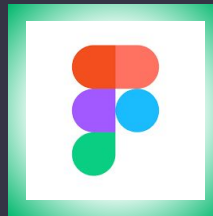
Pulls songs that apply to users request and create json that is readable by spotify



Used for account history databases and login authentication



Creates playlist usable by the user



Website prototyping and design



Front-end library



System Diagram (old)



User enters
request into
front-end

"chill vibes,
Taylor Swift..."



Back-end
sends user
query to LLM

["Champagne Problems", "Taylor Swift"]



Spotify API
call to find
all songs



Front-end
displays link
to playlist



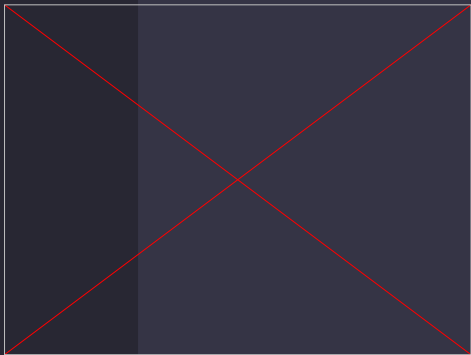
[https://
spotify.com/
playlist/...](https://spotify.com/playlist/...)



Spotify API
call to create
playlist

["song1", "song2", "song3"]





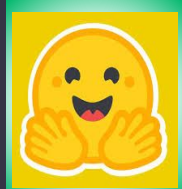
APIs



ChatGPT/DeepSeek

Limited free tier

3:15



HuggingFace

Poor responses

3:20



Ollama

Best for our purpose!

3:10





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What We Have Made So Far



- ♪ **Basic back end:** using Ollama with user prompt to return a list of songs. Stores chat history and can delete chat history in one session.
- ♪ **Basic front end** : text box for user input, displays output from llm, chat history remember unless deleted.
- ♪ Using **Spotify API** we can create a playlist with songs, titles and description and return link to open in a new tab (this is coded but not integrated).
- ♪ Begun researching and creating a **Database** structure (partially coded but not integrated).
- ♪ Begun creating a **Website Design**.



Lofi Mockup



Make a playlist please <3 <3

Aight fam, I gotchu. Here's a mid-tier funk playlist that also somehow has a Taylor Swift song!

Playlist Name

Playlist Description



Song

Artist



Song

Artist



Song

Artist

...

This is actual garbage </3

:(do you know how hard it is to make a playlist these days?





Initial Design



Conversation Name

Make a playlist please <3 <3

Aight fam, I gotchu. Here's a mid-tier funk playlist that also somehow has a Taylor Swift song!

Playlist Name

Playlist Description



Song

Artist



Song

Artist



Song

Artist

...

This is actual garbage </3





Timeline and Milestones

