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Team 6

Project Title: JudgeMe

Project Backlog

Problem

Spotify is a webapp that allows users to stream music to their phone, create playlists, and find new songs based on the characteristics of a song, playlist, or artist.

Spotify has useful features for curating and comparing playlists and music taste between users, but this sort of functionality is lacking in regards to groups; music taste can vary greatly in friend groups, and it can be hard to find music to play in the car that everyone can vibe with. There is no feature that compares the music taste of a user with the music taste of their group of friends, and there is also no feature that generates a playlist based on the interest of a group of people.

Background Information

Audience

JudgeMe was created with the intent to give Spotify listeners more insight into how their music taste aligns (or varies) with their friends. The domain of the application is music and social media, aimed at college-aged users who would be interested in using this sort of data.

Similar Platforms

Spotify has some similar features for finding similar through its new Blend feature, but it is limited in simply listing a couple shared songs and giving a vague percentage of how closely users' music taste matches. There are also many webapps out there to analyze a user's own music taste, but not to compare with others.

Limitations

Our solution gives more control and elaboration regarding how closely your taste matches with your friends, which also extends into friend groups. Additionally, JudgeMe will give more options for playlist creation, allowing you to mix between your friends' playlists as well as make remixes of their existing playlists.

Functional Requirements

Red Text = 'If Time Allows' User Story

1. As a user, I want to be able to log into the website using my Spotify account.
2. As a user, I want to be able to invite people to JudgeMe using any social media.
3. As a user, I want my friend rankings to be displayed as gold, silver, and bronze rankings when I first log onto JudgeMe.
4. As a user, I want to see options of what I can do on this website using my Spotify account information when I first log in.
5. As a user, I want to see what the website does when I click on the about section.
6. As a user, I want to visually see on a graph how my friends and my music taste align with each other by genre.
7. As a user, I want to visually see on a graph how my friends and my music taste aligns with each other by mood.
8. As a user, I want to be able to visually see via a slider where my friends' music taste lands on a genre spectrum.
9. As a user, I want to see my friends represented with their Spotify profile picture.
10. As a user, I want to be able to send my friends generated gifs insulting or complimenting their music taste after the comparison.
11. As a user; when I click a button to generate a playlist, I want the option to generate a playlist based on mood.
12. As a user, I want to have the option to generate a playlist based on artists or both artist and mood.

13. As a user, I would like to click a button for comparisons so that I could compare my playlists with my friend's playlists.
14. As a user, when I click the comparison button, I would like the option to compare my playlists with the playlists of a select number of friends.
15. As a user, I want to be able to choose what comparisons I make with the users and what sort of statistics I see in terms of graphs.
16. As a user, I want to see how similar my music taste is to an artist or genre via JudgeThem button
17. As a user, I want to expand those analyses to other statistical methods.
18. As a user, I want the statistical methods to be used to recommend songs based on my music taste
19. As a user, I want the statistical methods to be used to recommend songs based on a select list of friends.
20. As a user I want to create playlists full of songs based on multiple artists that I choose.
21. As a user, I would like a feature where I can set a playlist as my default playlist to add to. This will make adding songs to a playlist easier since I am not always given a listen option.
22. As a user, I would like to add songs to a playlist then have a feature that will scramble the song order in the playlist
23. As a user, I want to be able to search for artists and genres in JudgeMe.
24. As a user, when I click a button to run a comparison, I want the option to compare a select number of my playlists with a select number of my friends' playlist.
25. As a user, I would want to generate a playlist by pulling songs from my friends' playlists.
26. As a user, I want to select the playlists that I generate or take from my friends' playlist.
27. As a user, I want to filter the songs that I pull from my friends' playlists based on artist, mood or genre.
28. As a user, In addition to generating a playlist from my friends, I would want to select a group of people (this number would have a limit) that I generate a playlist from, which ensures I would have a playlist of songs that the group enjoys.

29. As a user, I want to select the playlists that I generate or take from my friend's playlist.
30. As a user, I want to filter the songs that I pull from the groups playlists based on artist, mood or genre.
31. As a user, I want to import and export playlists to and from spotify.
32. As a user, I want to be able to convert the playlists so that it can be used in other applications like Apple Music or Youtube Music and users from other platforms can use our application (given they have a spotify account).
33. As a user, I want to be able to download the statistics, graphs and ranking information as a .pdf or .png file.
34. As a user, I would want an option to share the details of my statistics, graphs and such to Instagram as a picture to post on my story.
35. As a user, I would want an option to share the details of my statistics, graphs and such to Snapchat as a snap.
36. As a user, I would want an option to share the details of my statistics, graphs and such to Tik Tok as a Tik Tok story, which is a short video.
37. As a user, I would want an option to share the details of my statistics, graphs and such to Twitter as a tweet.
38. As a user, I want to have more choices on conversion options.
39. As a user, I want to be able to add my location to see what other users in my city are listening to.
40. As a user, I want to be able to set my profile to private so others aren't able to view my statistics.
41. As a user, I want to be able to add other local users in my city.
42. As a user, I want to see what genres are most popular in every city on a map.
43. As a user, I want the option to generate a playlist of local artists.
44. As a user, I want the option to click a calendar button that shows my music taste for each month and/or season.
45. As a user, I want to be able to see on the calendar a picture of the artist/genre that I listened to most that day.

46. As a user, I want to be able to view a recap of my listening habits/favorite songs for each week.
47. As a user, I want to be able to pick a song when the website asks for it daily, and the results to be displayed at the end of the week.
48. As a user, I want to be able to share my weekly music on Instagram as a story using the Instagram API.
49. As a user, I want the option of a dark and light mode.

Mock Story Examples (to detail the importance of the main features of the webapp):

- We have a group of friends, Nick, Aarushi, John, Kenny and Suj
- They all have and use spotify but feel that spotify limits them to a lot more of the fun things they would want to do. For instance, Nick wanted to see who from the group has close music tastes to him and wants a ranking, so that he can judge and rank his friends.
- Kenny is a bit unorganized so the songs in his playlists are all over the place. When he finds a song, he doesn't take the time to organize it. But this backfires when Kenny wants to listen to a song with a certain mood and has to hunt through his playlist to find it. So he's been longing for a feature that generates a playlist for the mood he is feeling by taking songs throughout his other playlists and putting them into one.
- Aarushi, John and Suj want to find a way to do fun things with each other's playlists. John really likes Suj's music taste so he actually wants to generate his playlists based on Suj's playlists. He especially likes the songs Suj chose for the summer vibes so John would like a feature that generates a playlist based on his friends playlists. Aarushi likes both John and Suj's playlist because her own music is horrible. So, she would like a feature that generates a playlist based on her group's music taste. She is begging for this feature so that someone will actually let her play music in the car.

Non-functional Requirements

Architecture

We plan to build a web application that populates the database on the backend using the Spotify API. The database will be made using SQLite, and it will store user information between and during sessions. The frontend will be made using Django, which is a full stack web framework. This will allow us to pull any information that we need from the database by requests from the API, as set up in Django since it can integrate SQLite. The web application will also have a 90% uptime with minimal need for site upkeep; and as more users start using the web application, the database will grow.

Security

The user will have sensitive information tied to the users' Spotify account, so JudgeMe will have several security implementations. Django has built-in security features that prevent SQL injection, cross-site scripting, cross-site request forgery and clickjacking. We will hash passwords using sha-256 to encrypt the users credential and spotify API keys, if Django does not have a method for encryption, to make sure we don't expose sensitive information to unauthorized users. If time permits, we may use a verification process of some sort to protect the user's information.

Usability

The webapp should have a simple, clean interface that follows current design trends. Spotify itself uses rounded, bubbly buttons as well as bright colors and some unique shape language in their designs, which can be mimicked for the front facing portions of the site in order to give the user a sense of familiarity even on their first session. Because many users will access the app on their phones, the website should be responsive and resizable to all screen sizes.

Hosting and Deployment

The database will be made using SQLite, while the frontend and backend will be deployed using the Django (full stack) web framework. To host the website, pythonanywhere.com will be used. Data will also be acquired using Spotify's API.