Music Blender Description Summary

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Overview and Purpose:

Music Blender aims to take the benign task of listening to music on a ride and push it to the next level by making it a fully dynamic experience that can be shaped by the preferences of other users in the vicinity. This is accomplished by taking the user's GPS location and taking an aggregate of all other users within a specified radius and totalling the most popular songs and appointing them to distinct regions, allowing for the user to create an entirely unique playlist based solely on the location at which they decide to seed the playlist. Additionally Music Blender features a "travel mode" where instead of seeding a whole playlist, only one song is seeded and played, and once it finishes the next is seeded with brand new coordinates of the user's updated location. This allows for a constantly evolving experience of music and serves as an excellent companion for travel, especially internationally. The streaming industry has stagnated in recent years and we believe Music Blender can be the new shakeup needed.

Requirements:

Music Blender needs to be fast so our users don't have to wait too long to start listening to their music. Our application revolves around giving listeners a song playlist generated by our system based on their location and song preferences as . We require that music blender is able to return a playlist in under two seconds. Accuracy is also important because we need to use the user's location, we strive for our GPS system to have a low margin with error. To keep up with competitors and prevent users from moving to other apps, we must also need Music Blender to be dependable. This means that we expect to have at least a 99.5% uptime on our service's server. Privacy requirement includes systems that allows user's to have anonymity when making playlists and safekeeps their location. Security requirements include checks that songs are songs and not malware, systems that safely allows users to make payments, and additional authentication systems to prevent unwanted account access.

Design Goals:

Music Blender will, for better or worse, live and die by its design. This is both in a structural sense and in an aesthetic sense. The sheer amount of user data that has to be constantly requested can very easily make this product non-viable if not handled properly. For much of our application we depend on cloud-based services to store our data and have it readily available for our users, however this is not for free and every call to the database should be scrutinized to see when it is necessary and when not. For instance, many savings could be made simply by pinging to the nearest user before accessing the cloud service in case they already have an up-to-date average of the user preferences in the area.

From an aesthetic perspective, mass adoption heavily hinges on the learnability of our user interface, as well as how visually pleasing it is overall. We want our app to limit itself to three primary application colors and make use of them wherever appropriate to give a sleek and modern feel that makes users want to voluntarily share their experience with others who have not yet tried Music Blender.

Test Plans:

Before the full release, Music Blender will need to undergo a number of acceptance tests based on ten major requirement categories. These tests will range from basic functionality tests to things such as performance, security, useability, and operational tests, among others. Music Blender will also undergo a staged rollout during its initial release, separated into alpha, beta, and full release windows, with each stage opening the app to more regions. While functionality under a heavy load is to be verified under the acceptance tests, this release strategy will help to ensure that no hiccups are encountered when releasing the app to the general public.

Project Issues & Solutions:

As a platform reliant on third-party music, Music Blender will need to ensure compliancy with the copyright laws of the respective regions and countries it is being used in. While it may not be possible in every case to obtain licensing for every song in every region, having a legal team on hand to help with such cases will be important.

It is also important to recognize that as a platform based on user-inputed music and audio files, that Music Blender have sufficient moderation in order to keep the platform both family and advertiser-friendly. Music with explicit lyrics or themes should be flagged as such, and the same goes for non-musical audio files uploaded, such as podcasts or audiobooks. Since users may also attempt to upload copyrighted material that shouldn't be available in their region, proper precautions will be needed in order to both prevent and remove them. This can take the form of an AI to scan uploaded material, a dedicated moderation team, or even both if the need arises.

Of course, hiring legal and moderation teams isn't free, but such should part of the expected upkeep costs of running Music Blender. Just as current media apps and websites such as YouTube and Spotify, Music Blender will be a live service, and will need the appropriate resources in order to operate as such.