1) Project description

Lyrics generator & song searcher based on an artist:

Idea 1: fetch 10 titles from Spotify (1), pass through ChatGPT to remix lyrics (2)

Train model on the artist (1), then have it create lyrics based on another artist's song lyrics(?) (2)

Idea 2: search songs through keyword (1), google search facts about the song (2)

Idea 3: search all songs from an artist (1), then find a set of songs based on keywords (2?)

Our project will be using ChatGPT API with Spotify API for fetching songs. We use MySQL to store structured data such as user information, song metadata, and relationships between artists, songs, and user searches.

2) Product requirements

Goal: Create an innovative web interface that enables users to generate unique lyrics based on their favorite artists and search for songs or artists using specific keywords.

Non-goal: Automate the training of the model for each artist without manual intervention and provide real-time updates or synchronization of lyrics and song searches across multiple devices.

Non-functional Requirement 1: Usability
Functional Requirements:
1. Ensure the web interface is user-friendly, with intuitive navigation for both lyrics generation and song searching.
2. Provide clear instructions or tooltips to guide new users through the process of generating lyrics and searching for songs.

Non-functional Requirement 2: Scalability

Functional Requirements:
1. Design the backend to efficiently handle varying loads, ensuring quick response times for lyrics generation and song searches.
2. Optimize database queries and storage for fast retrieval of previous searches and generated lyrics.

3) Product management

Theme: Enhance music discovery and creativity through artist-based lyrics generation and song search.

Epic: Lyrics Generation and Song Search Platform Development

User Story 1: As a music lover,, I want to generate unique lyrics based on my favorite artist so I can explore creative interpretations of their style.

Task: Implement lyrics generation feature
Ticket 1: Research and integrate ChatGPT API
Details: Investigate the latest documentation on the ChatGPT API. Implement an API call structure that allows sending artist information and receiving generated lyrics.
Ticket 2: Design lyrics generation algorithm
Details: Develop an algorithm that inputs artist data and song titles to ChatGPT for lyrics generation. Ensure the algorithm accounts for variances in styles and themes.

User Story 2:
As a fan of a certain artist, I want to search for his or her songs using keywords so I can find new music that matches my interests.

Task: Implement a keyword-based song search feature
Ticket 1: Integrate Spotify Search API
Details: Utilize the Spotify API to implement a search feature that allows users to input keywords and returns relevant song or artist results. Ensure proper authentication and API rate handling.
Ticket 2: Create search result filtering logic
Details: Design and implement logic that filters search results based on user input keywords. This includes sorting and prioritizing results to enhance user discovery and satisfaction.