Only a few decades back, choosing music by genre and/or artist was effectively the only option. This has changed dramatically since millennials now a day's select music based on their mood. To provide a solution we propose **SoulMusic – Music for Every Mood,** A full-fledged website exclusively for music enthusiasts where users will be able to listen to songs based on their mood without searching for it.

Objectives:

* To implement an AI based mood detection system named Emotion-BERT from scratch using transformers.
* To use AI techniques to sort music based on features like danceability, energy, loudness, tempo, audio valence, instrumentalness.
* To combine the above-mentioned features i.e to detect mood and suggest a songs from the sorted list.

Mini Project Contribution:

This project is useful in many fronts since we have successfully implemented two grave functionalities i.e. mood detection based on input and fetching of songs based on a particular input.

The above-mentioned functions have vast range of uses as separate functions. We at SoulMusic have combined the use cases of both the functions and have made listening to songs based on mood very easy.

**PROCESS DESIGN:**

There are three distinct components.

1. Client application-

This is the front end where the bot makes small talk with the user by asking questions like “what is your name”, “how was your day” etc.

1. ML Model: The input entered on the client side is than feuded to the Bert Model wherein the mood of the user is detected. Then the detected mood is fetched to the second model i.e. the Songs EDA where on the basis of detected mood songs are fetched.
2. Api: The model has been converted into a rest api framework (restful) and all the communication between the client side and the model is achieved by virtue of API (get & pull requests)

**Limitation Existing/Similar system or research gap**

There are many existing systems that predict mood and there are many other systems which recommend songs but there is no system which clubs the two distinct features i.e. detects mood and recommends songs based on the detected mood.