Music Recommender Bot

Version

Data	Version	Comment	Editor
2024.05.15	0.0.1	Draft	E.W
2024.05.19	0.0.11	Revise object and future	E.W

Background

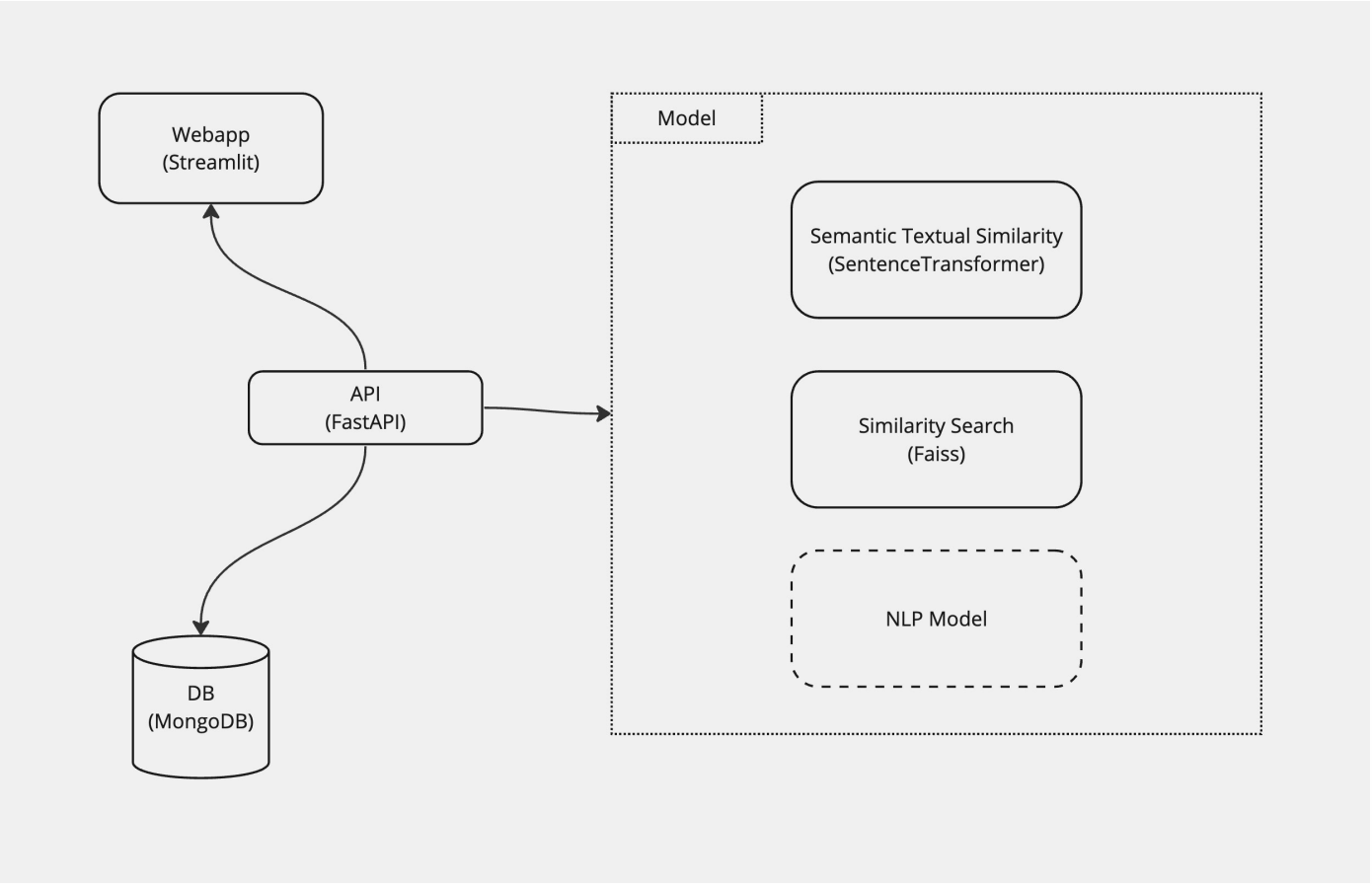
It is a product-type project for the deep learning class.

Music is a common way for most people to release stress, seek comfort, and pass the time. However, major music streaming platforms like Spotify and Apple Music lack mood-based recommendation features. Additionally, they do not seem to effectively integrate AI technology into their products, which can come across as insensitive to users' needs.

Object

To fill the blank in the market, this project aims to develop a chatbot, leveraging AI to recommend the most suitable playlists based on user input. Users can write down a few sentences about their feelings and then receive their recommendations of music that is close to the mood

Components



Webapp

it is a local host web using Streamlit framework. One page with the chat window only allows users to send text information.

Features:

Webpage; Error reminder; Rate the response; Regenerate

API

Make_recommand:

```
{
  "request": {
    "input": [
      "I am happy"
    ]
  }
}

{
  "response": {
```

```
    "output": [
      {
        "0": {
          "happy": 0.9
        }
      },
      {
        "1": {
          "Happy": 0.9
        }
      },
      {
        "2": {
          "Happy": 0.9
        }
      },
      {
        "3": {
          "Happy": 0.9
        }
      },
      {
        "4": {
          "Happy": 0.9
        }
      }
    ]
  }
}
```


Save_result


```
{
  "request": {
    "input": [
      {
        "0": {
          "Happy": 0.9,
          "rating": 5
        }
      },
      {
        "1": {
          "Happy": 0.9,
          "rating": 5
        }
      },
      {
        "2": {
          "Happy": 0.9,
          "rating": 5
        }
      },
```

```
      {
        "3": {
          "Happy": 0.9,
          "rating": 5
        }
      },
      {
        "4": {
          "Happy": 0.9,
          "rating": 5
        }
      }
    ]
  }
}

{
  "response": {
    "output": [
      "data saved successfully!"
    ]
  }
}
```

Model

Sentencetransfomer will encode the text into a vector -> search for the most similar vector of the input -> Create an Index using FAISS

DB

Save the recommendation to the DB for future improvement.

Future

- Return the songs directly via Spotify API
- Add LM to understand users' moods then generate a guide sentence
- Remember the content of one dialogue
- Collaborative recommendation by user portrait