Team 4 Ideas

1. Twitter Music
   1. Twitter Music is a web application that recommends a music playlist based on the sentiment of a Twitter post. The application operates with three APIs: WebScraping API, HuggingFace API, and Spotify API. A ‘Roberta’ classification model pre-trained to produce the sentiments of a text is provided as a HuggingFace API. The capability of finding music through its features (danceability, energy, tempo, etc.) will be utilized through the Spotify API. The user will input their Twitter account link, which the WebScraping API will use to extract data. The text from each post will be loaded into the HuggingFace API, which will deliver details in sentiment. The provided numbers will be translated into metrics for the music feature while abiding by the preset rules. Finally, the features will be transferred to the Spotify API, outputting the music playlist related to those tweets.
2. Art Gallery
   1. Art Gallery is a web application that generates a piece of art and recommends a piece of music based on the keywords given by the user. The idea of ‘Art Gallery’ derives from modern art museums with QR codes provided next to artworks, which display related classical music to enhance the experience. The application handles two APIs: HuggingFace API and Spotify API. A ‘Stable Diffusion’ text-to-image diffusion model is prepared as a HuggingFace API, generating a photo-realistic image on the given keywords. Meanwhile, the keywords are also transferred to the Spotify API, recommending music related to the created art. The freshly generated piece of art harmonizing with the recommended music is saved to the database, which becomes the users’ art gallery. Art galleries are presented under user accounts to be appreciated by website visitors.