

IM3080 Design and Innovation Project (AY2023/24 Semester 2)

Individual Report

Name: Goh Keng Yin, Donovan

Group No: 01

Project Title: Moodify

Contributions to the Project (1 page)

Projection Initiation/Design

- Brainstorm ideas/design/tech stack for potential projects
- Designed preliminary designs for Moodify app
- Initialised Firebase for backend

Frontend

- Built embed music player for Music Diary

Backend

- Researched language models for implementation as chatbot
- Integrated chatbot powered by OpenAI GPT 3.5 using Python into app
- Developed Flask server to expose chatbot as API for app to call
- Finetuned chatbot to recommend music based on current mood in accordance with use case
- Assisted in development of Spotify API
 - Implemented login/logout feature with Firebase Authentication
 - Implemented Music Player functionality
- Built functions to extract songs from chatbot's text output using Regex
- Built Firebase databases to store Search history and Music Diary songs
 - Coded functions to send data retrieved from frontend into Firebase databases

DevOps

- Taught groupmates how to use Flask and chatbot.
- Taught groupmates Regex
- QA Testing
- Bug Fixing across frontend and backend

Student

- Wrote majority of group report so that rest of the group can focus on refining the app
- Acting in demo video

Reflection on Learning Outcome Attainment

Reflect on your experience during your project and the achievements you have relating to at least two of the points below:

- (a) Engineering knowledge
- (b) Problem Analysis
- (c) Investigation
- (d) Design/development of Solutions
- (e) Modern Tool Usage
- (f) The Engineer and Society
- (g) Environment and Sustainability
- (h) Ethics
- (i) Individual and Team Work
- (j) Communication
- (k) Project Management and Finance
- (l) Lifelong Learning

Point 1: Modern Tool Usage

Through this project, I improved my skill in using AI solutions to solve problems. I also improved my knowledge of Github for version control and branches while working in a team as I used to use Github alone. I also learnt how to use Jira as a project management tool and to keep myself on task and to check on the status of the rest of the team so that I can keep pace and prioritise the delivery of certain components depending on what the team needs more urgently.

Point 2: Individual and Team Work / Communication

I learnt how to work in a large team on the development of an app via this project. Previously I was used to working solo or in pairs based on the previous projects taught in school and in my internship, which would allow me more control over the project. Working in a bigger team taught me communication skills as well as how to synergise with fellow group members for efficient development. I learnt that it is important to organize files coherently and write code neatly so that others will be able to read and understand the logical flow of the project quickly. I also learnt the importance of delegation of responsibility.