

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

## **Individual Report**

Name: Nguyen Tuan Anh

Group No: 01

Project Title: Moodify

### **Contributions to the Project (1 page)**

#### **Planning:**

- One of two finalise ideas from the group
- Developed a comprehensive site map for Moodify, designed a template for the use case and ER diagram, reviewed the work with a teammate and assisted in refining and enhancing the ER diagram
- Conducted research about the music industry

#### **UI/UX Design:**

- Conceptualized and designed all pages of Figma
- Connected all designed pages to create a functional prototype.

#### **Software Development (Full stack)**

- Constructed the folder structure for the frontend team
- Developed Onboarding, Sign up, Sign in with Spotify, Forgot password pages and designed Home Screen page template
- Developed AI Chatbot Music Recommender and VR Experience
- Developed backend service for saving the songs to music diary from chatbot and integrating the songs to VR Experience from music diary

#### **DevOps:**

- Taught groupmate about git version control in the very first weeks of the semester
- Provided training to the team on implementing the new feature, which involves running a Flask server for the AI chatbot and enabling WebVR for the VR experience.
- Fixed 4 significant errors and warning features in the last week of finalising the app
- Refactored teammates' code.

#### **Student:**

- Be an actor in the demo video
- Write the implementation, final designs and appendices parts for the report Create slide template for the team; develop and present slides for the design section
- Beautified the poster and presentation slide

## 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: Design/development of Solutions

Through Moodify project with 5 other teammates, I have acquired the ability to develop innovative full-stack features in mobile and web applications. From ideation to production stages, I have been responsible for defining user stories for both AI Chatbot and VR Experience. I conducted research on current tools/technologies and learned how to apply them to my project. A memorable challenge was deciding between Unity for NativeVR and A-frame for WebVR for our VR Concert feature, a decision that underscored the importance of thoughtful design and technical choices. Utilizing the OpenAI API, I further innovated by integrating song recommendations generated by AI, connecting these to our database server. This project not only refined my technical acumen but also underscored the value of continuous learning in system design. In the future, when I work in the real-world industry, I will encounter many challenging tasks like this that require me to learn the technology and previous solutions myself and apply them to the current situation.

### Point 2: Communication + Individual and Team Work

Reflecting on my time with our team, I've learned the importance of effective communication and regular meetings to stay aligned, which has been pivotal for our project's success. I felt incredibly honored when my Figma design was chosen, and the support and feedback from my teammates not only refined the design but also boosted my confidence. Tackling new app features, I reached out to the team member for support, which enhanced both our project and our team dynamics, such as when we developed the AI chatbot feature, whenever I need the OpenAI API key access, there will be a member in backend team helping me. Having the opportunity to present my concept and the work I've accomplished for the initial task within a small team like the DIP team will undoubtedly be a significant experience for me. This is because, in the real-world industry, I'll need to proactively seek assistance, effectively communicate with my team, be eager to share my ideas, and be willing to ask questions.