

IM3080 Design and Innovation Project (AY2023/24 Semester 1)

Individual Report

Name: Ngin Yunxuan

Group No: 6

Project Title: ARvatar

Contributions to the Project (1 page)

Team leader duties:

- Keep track of team member's progress weekly
- Keep track of overall progress to meet deadlines/schedules using Trello
- Coordinate meetings and discussions both in and out of class
- Delegate workload equally and to each member's strengths

Technical contributions:

- Figma ChatUI and visual sketches
- 3D Modelling – Learned to 3D model for avatar customization options using Blender
 - Accessories: Watch
 - Hats: Beret, crown, horns, night cap, party hat, porkpie hat, star hairclip, straw boater, flower crown
 - Shoes: Boots, business shoes, lace up boots, mary janes, sandals, sneakers
- 3D Texturing – Learned to create textures and patterns for the 3D avatar in Adobe Substance 3D Painter
 - Patterns: Spots, stripes and scars for both cat and dog models
- 3D Animation – Learned to animate emotes in Blender
 - Emotes: Waving, angry, thinking, shocked, laughing
- 2D Assets – Drew out 2D version of Avatar and all customization options (for use on Chat list page)
 - Avatar: base white cat, base white dog, and colored versions of cat and dog (blue, green, orange, pink, purple, red)
 - Customisation options: Beret, crown, horns, night cap, party hat, porkpie hat, star hairclip, straw boater, flower crown
 - Patterns: Spots, stripes and scars
- Deliverables
 - Report writing (Background, Motivation)
 - Creation of 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: Individual and Team Work

Individually, I was happy that I was able to contribute with my strengths in art and design since art is also a personal passion of mine. With the help of some of my teammates with prior 3D experience, I believe I was able to apply and learn a lot of new skills, including Blender (3D modelling and animation), as well as texturing with Adobe Substance Painter. Though I still have much to learn, I look forward to using these new skills in my future works.

With regards to team work, I personally had an enjoyable time working with my group. As I was the designated leader of the group, I've had to take the initiative in delegating work, ensuring progress, and getting feedback every week, such that there was steady progress towards our goal. I've learned a lot about how to realistically plan aspects of a project over time, such as when is a good time to move on from one aspect of the app, or to discuss the reduction of deliverables to ensure we meet deadlines. My teammates were also vital in helping me understand the technical details of the project, especially the backend as I was not as experienced with it. With their knowledge, I was able to delegate work and plan progress better. I had a better understanding of what step-by-step tasks were required to be completed. Hence, with the help of my teammates, I've learned how to better communicate and manage a semester-long project. I am fortunate to have been assigned a friendly and hardworking team, as without them I would not have been able to carry out my duties as smoothly.

Point 2: Modern Tool Usage

Throughout the semester, I have been able to learn and make use of a few new tools such as Trello as a project management tool, and Unity, Figma, GitHub, Blender, Adobe Substance 3D Painter, and Clip Studio Paint as technical tools. Though I had little to no experience with these tools prior to the start of this project, I am now more confident in my ability to navigate and use these tools for my future projects, especially since some of these tools might be useful in some industries. Though I still have much to learn, I believe this project has given me a good foundation of skills with regards to these tools, and I look forward to making use of them again in the future.

Point 3: Communication

Communication was vital in ensuring the success of our project. Over the semester, I personally learned a lot about communicating effectively within a team, especially since I had to keep track of progress that each member did each week. We made use of many mediums to communicate, such as a group chat on telegram, zoom meetings as well as in-person meetings, and good communication helped to ensure everyone was always on the same page about the project. Hence, I believe I have learned to communicate in a large group more effectively, especially for a long project such as this one.