



Portfolio *2020*

by Gan Qi Wen

Loops

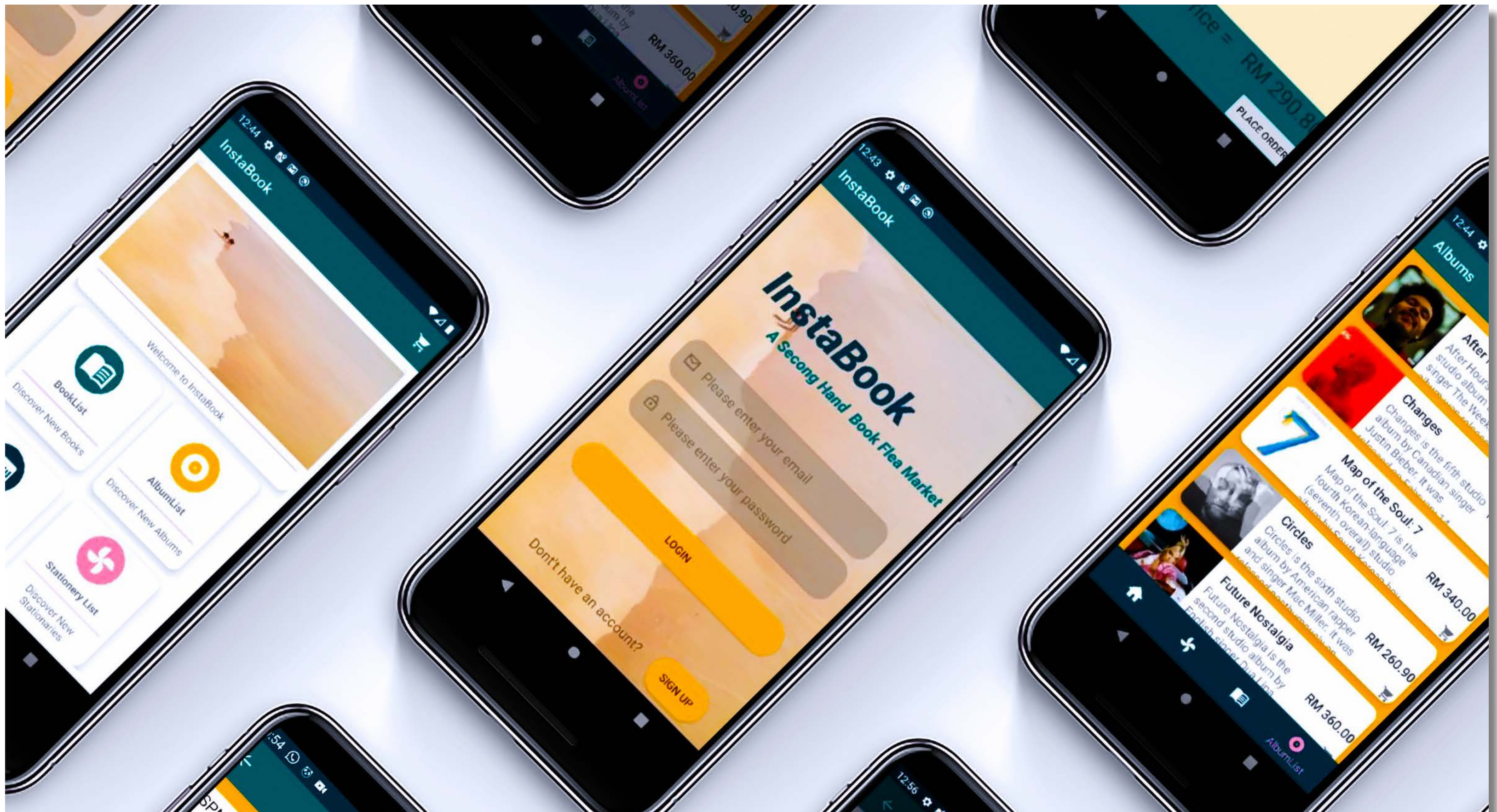
Cyberpunk Visual Effect
Modelled and rendered in Blender ©.



Technology

Website Development
Mobile Apps Development
Online Games Development
Mobile Games Development
Machine Learning

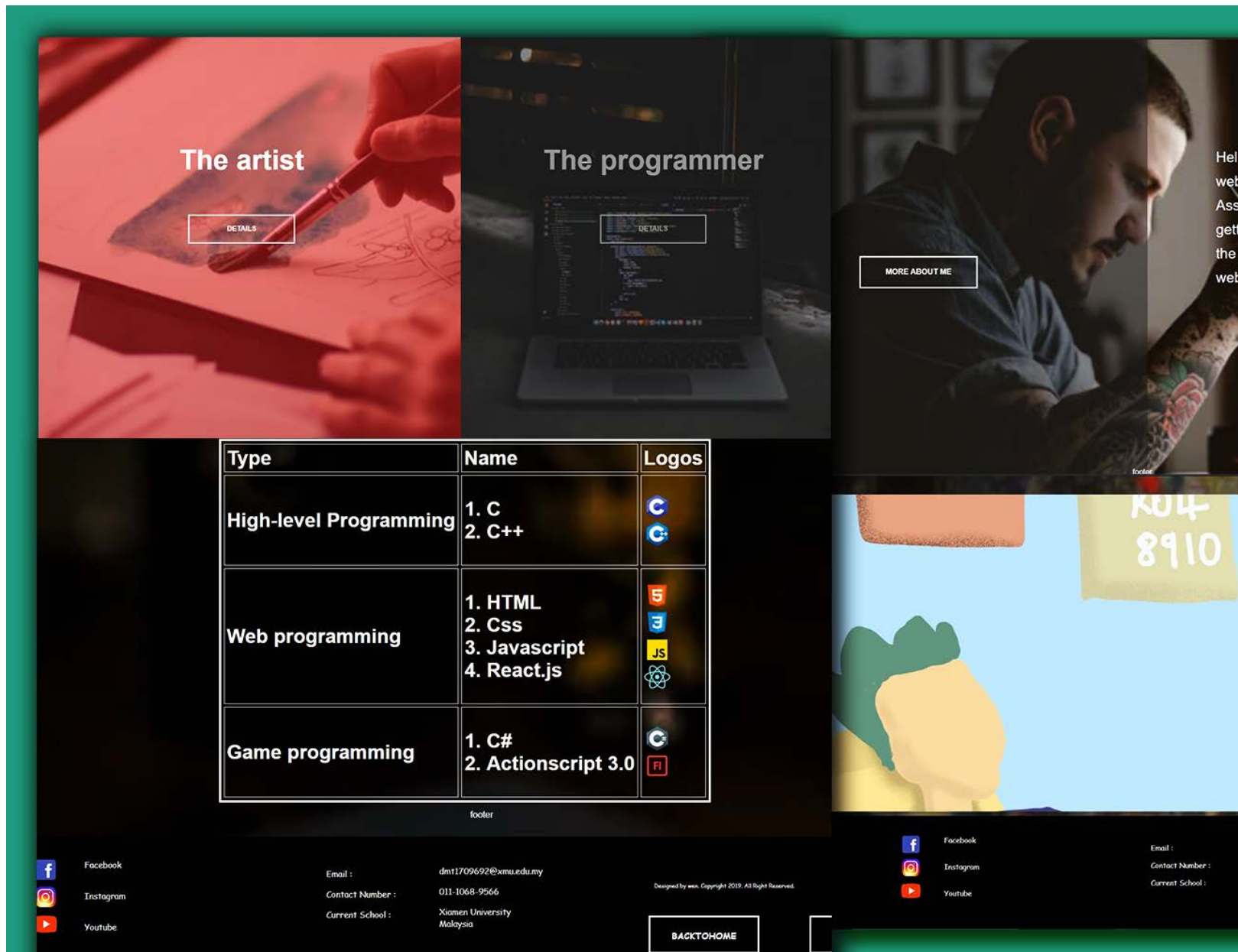
Qinwen



InstaBook

Andriod Mobile Application Development

Created in Andriod Studio with Java and Google Firebase©.



Website Development

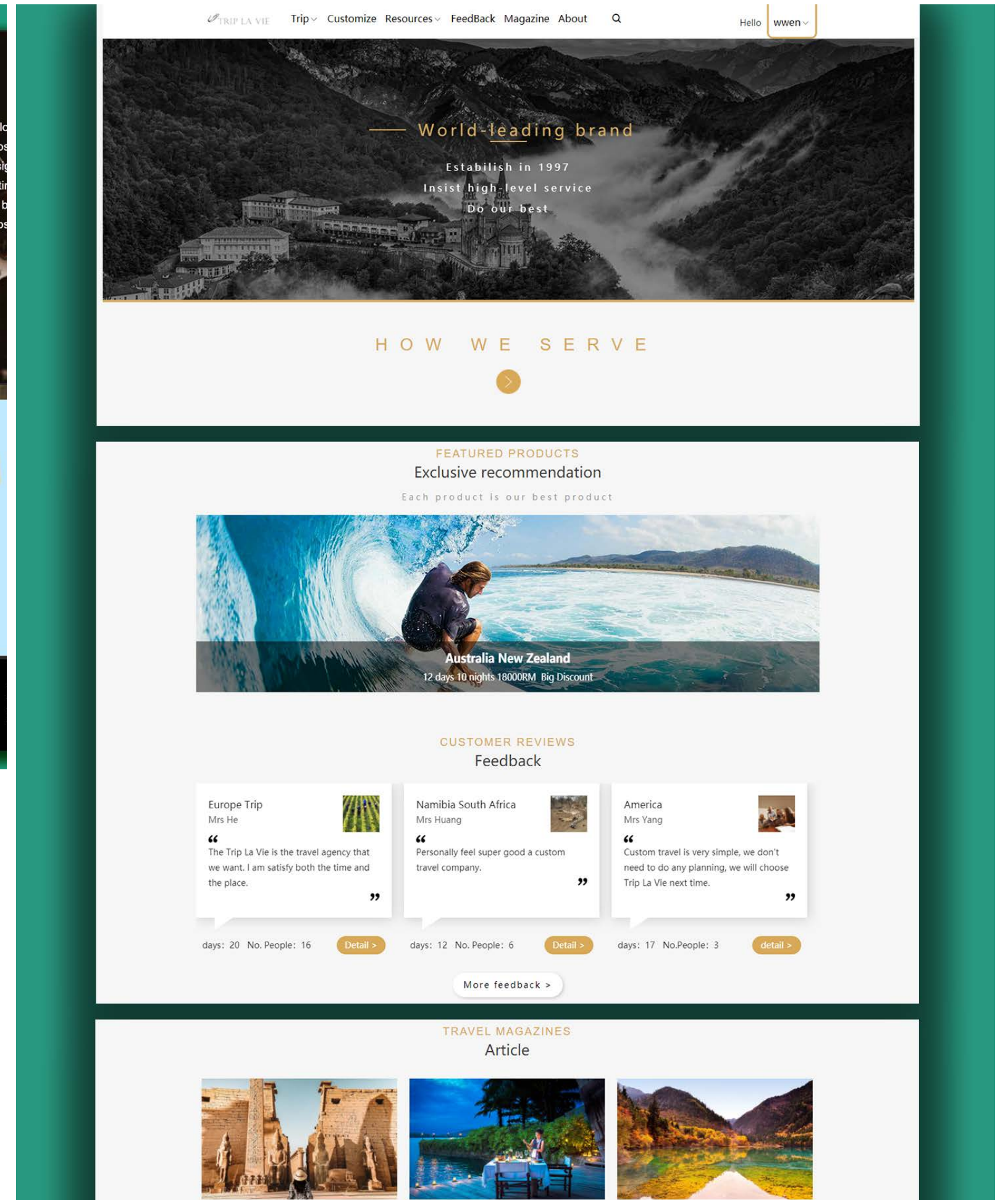
Portfolio and Trip La Vie

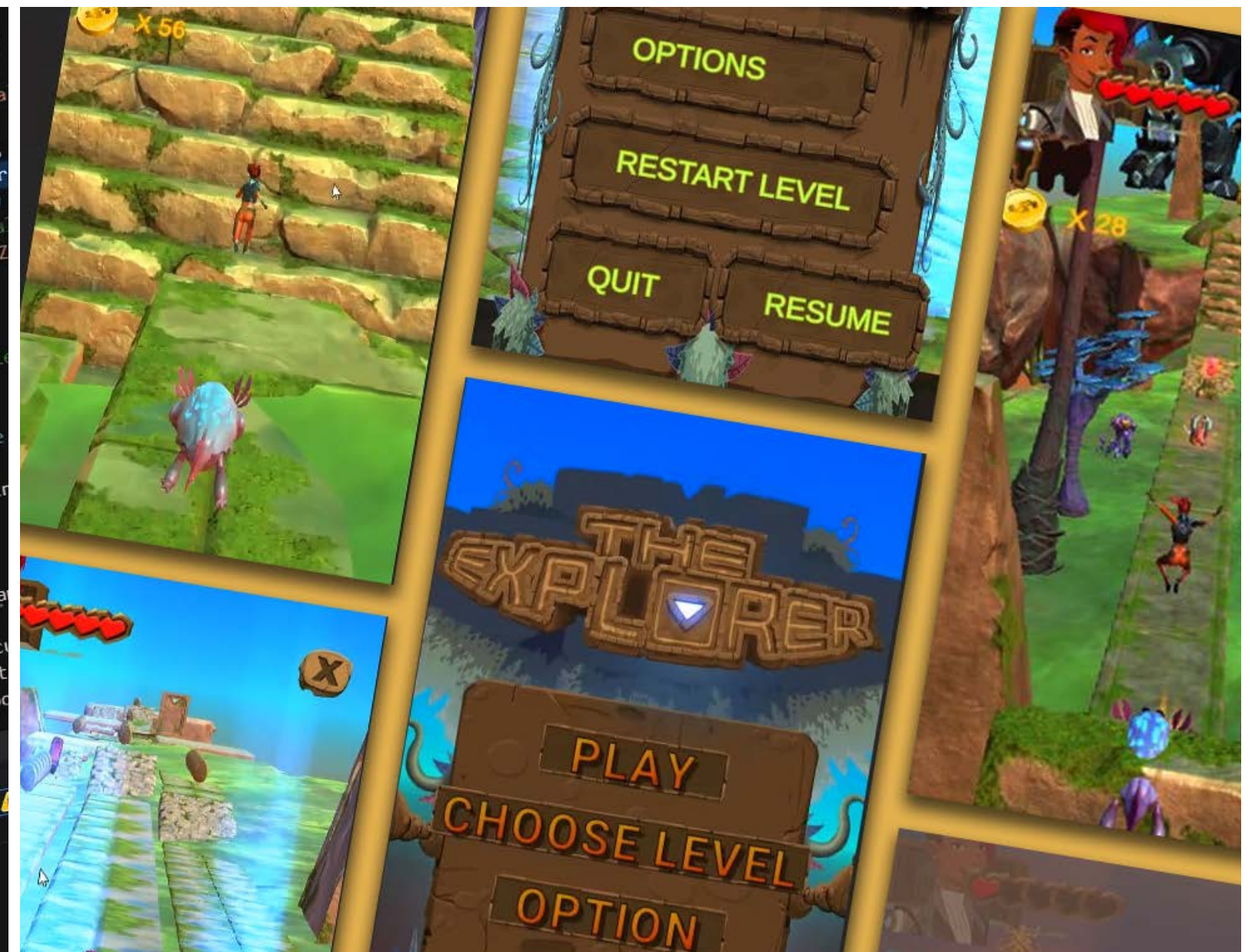
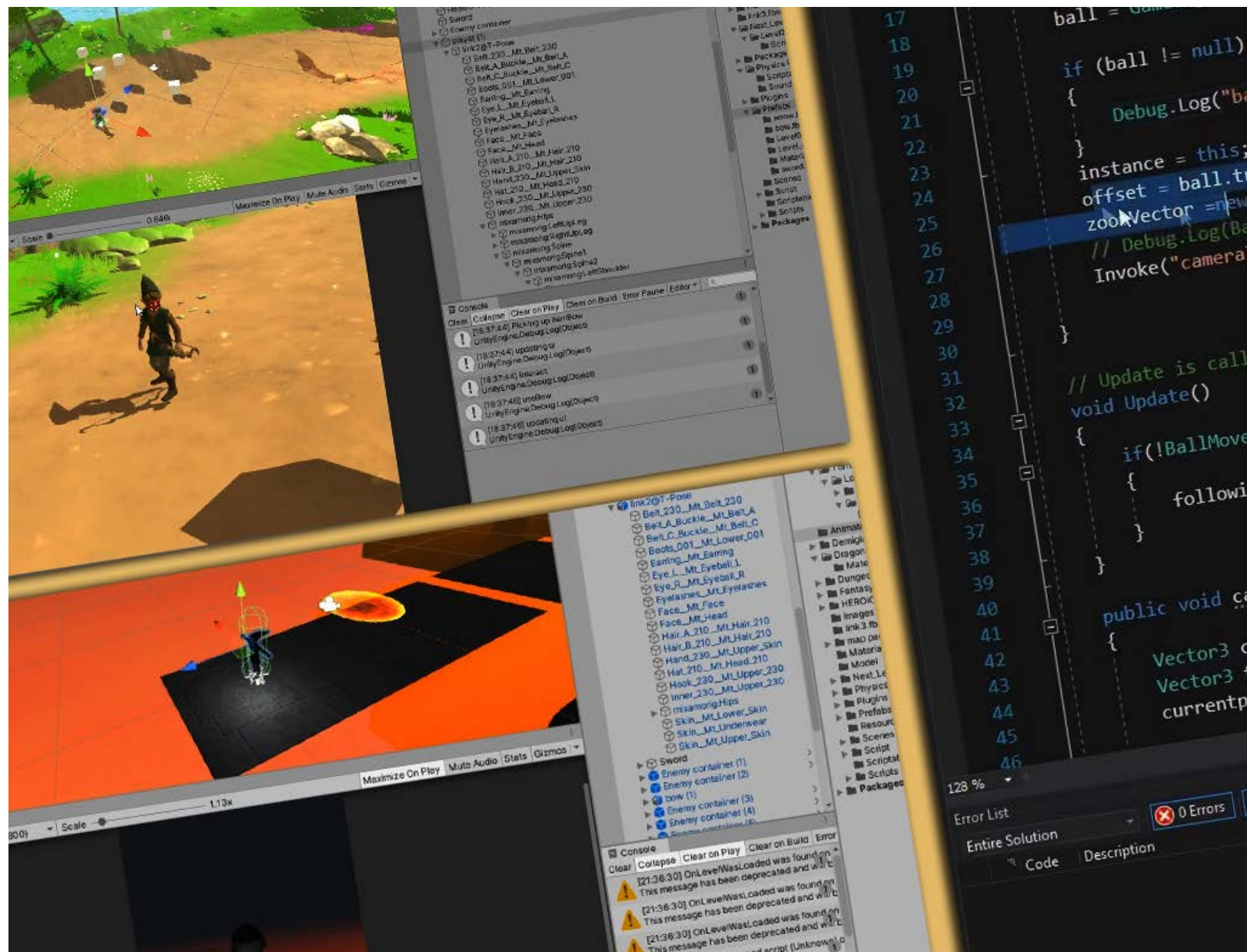
Front and Back-end integrated.

The left pictures are related to the portfolio regarding me. Using basic languages like HTML, CSS, and javascript, a brief portfolio website has been done. The animation is also included in the footer section when the navigator is scrolling down to the end of the pages. This website is hosted locally and did not include database integration.

This website was my first trial on the self-creating website. Although there are still some flaws in the design and functioning. But it was all a part of the learning process.

The Trip La Vie is a fully functional and commercialize website which integrated front-end and back-end development. PHP for backend and MySQL was included for the queries of page information. The login and logout system also allows users to register themselves on our website. An e-wallet top-up system is also included and it can be linked to any bank APIs for credit purchasing. The purchasing of the credit can be used as a token for the user to purchase trip packages.





Mobile Games Development

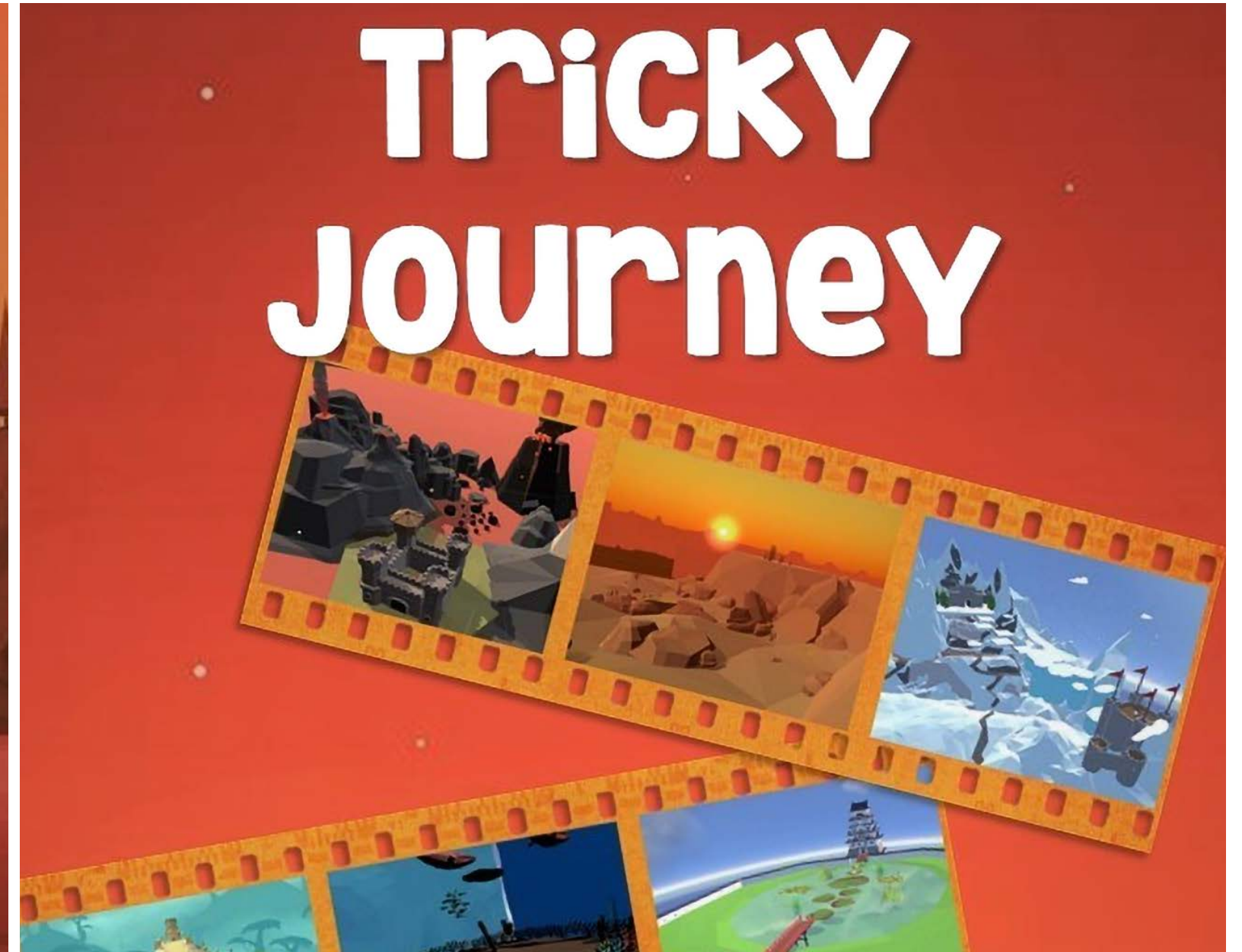
The Explorer

Embedded Game's Project

The project is created in my year 3 sem 3, embedded game class. This class is focused on building the c# programming skills and development skills. As an individual player. I have come out with this explorer concept as my game topic. This game is fully created in the Unity game engine. Part of the game assets is provided by unity official and the animations are rigged and downloaded from Mixamo©.

In Unity, I had integrated the animation blending system, combat system, inventory system for this project. Another RPG projects called "The Ginger Man" is also created using Unity, the mobile controlled system is added and it can be exported as Android Package and played on Android's phone.





Online Games Development

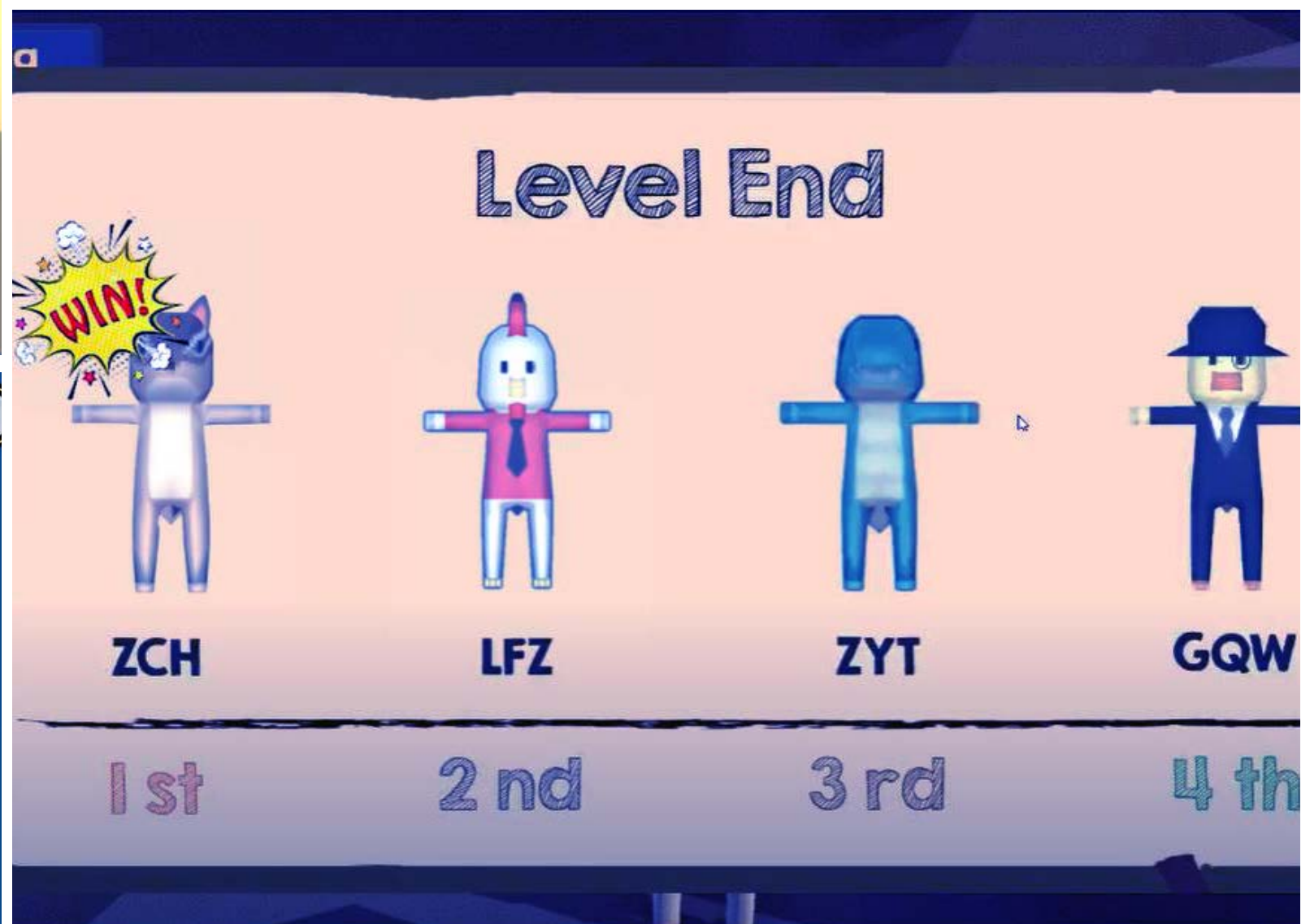
Tricky Journey

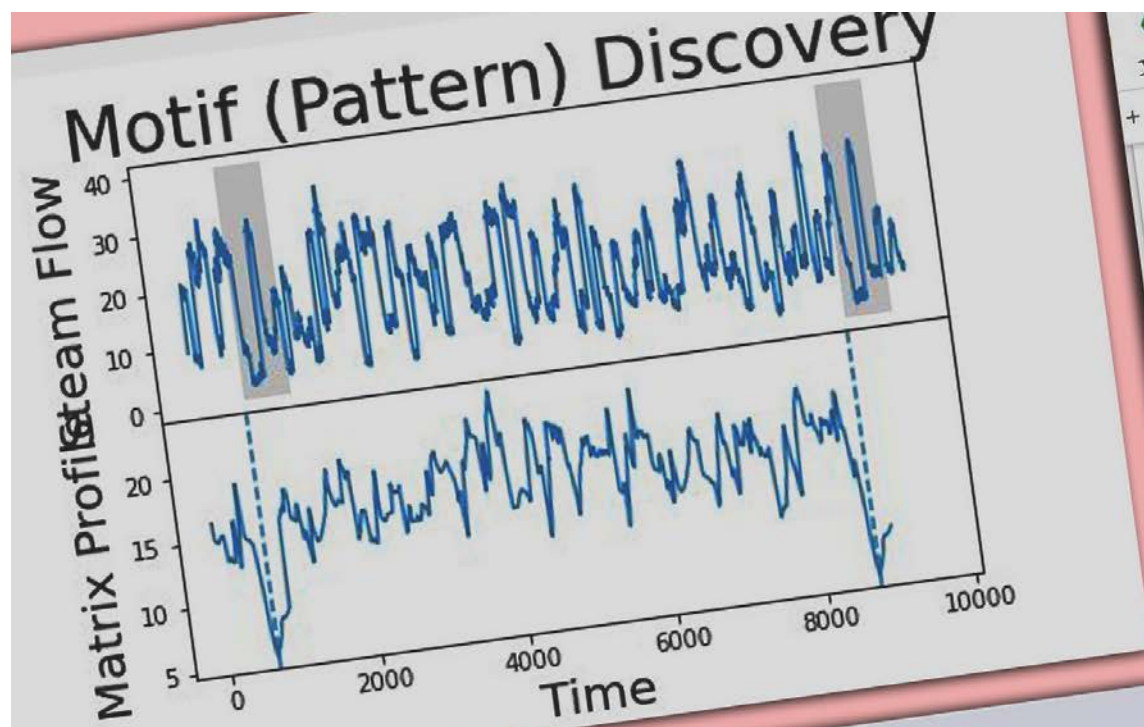
Fully Marketable Online Game

The project is created in my year 3 sem 3, Online Game Development class. This class is focused on building an interactive multiplayer online game Working in a team of 6. We have come out with this tricky journey concept as our final game. This game is coded in C# language. This game is fully done in Unity and the Photon framework.

Because of the pandemic situation, this project has been fully carried out by using Github. All of the teammates have been working remotely and performed the best skills in this project. I worked in the team leader position and responsible for the logic of the whole gaming framework.



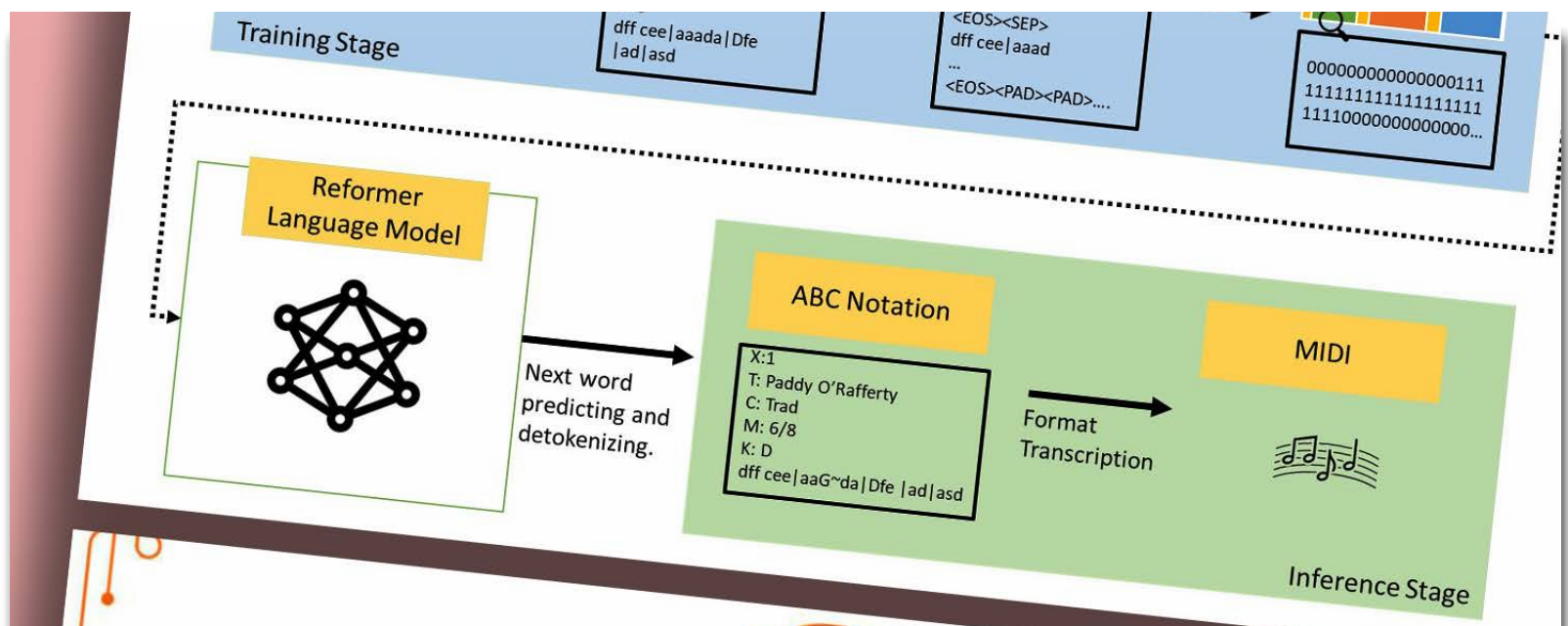




```

文件 修改 视图 插入 代码执行程序 上一步
+ 代码 + 文本
Step 1980: Ran 20 train steps in 94.70 s
Step 1980: train CrossEntropyLoss | 0.8
Step 1980: eval CrossEntropyLoss | 0.7
Step 1980: eval Accuracy | 0.1
Step 2000: Ran 20 train steps in 99.96 s
Step 2000: train CrossEntropyLoss | 0.8
Step 2000: eval CrossEntropyLoss | 0.7
Step 2000: eval Accuracy | 0.1
Step 2020: Ran 20 train steps in 93.8 s
Step 2020: train CrossEntropyLoss | 0.8
Step 2020: eval CrossEntropyLoss | 0.7
Step 2020: eval Accuracy | 0.1
Step 2040: Ran 20 train steps in 95.8 s
Step 2040: train CrossEntropyLoss | 0.8
Step 2040: eval CrossEntropyLoss | 0.7
Step 2040: eval Accuracy | 0.1
Step 2060: Ran 20 train steps in 94.8 s
Step 2060: train CrossEntropyLoss | 0.8
Step 2060: eval CrossEntropyLoss | 0.7
Step 2060: eval Accuracy | 0.1
Step 2080: Ran 20 train steps in 94.8 s
Step 2080: train CrossEntropyLoss | 0.8
Step 2080: eval CrossEntropyLoss | 0.7
Step 2080: eval Accuracy | 0.1
Step 2100: Ran 20 train steps in 94.8 s
Step 2100: train CrossEntropyLoss | 0.8
Step 2100: eval CrossEntropyLoss | 0.7
Step 2100: eval Accuracy | 0.1
Step 2120: Ran 20 train steps in 94.8 s
Step 2120: train CrossEntropyLoss | 0.8
Step 2120: eval CrossEntropyLoss | 0.7
Step 2120: eval Accuracy | 0.1
Step 2140: Ran 20 train steps in 94.8 s
Step 2140: train CrossEntropyLoss | 0.8
Step 2140: eval CrossEntropyLoss | 0.7
Step 2140: eval Accuracy | 0.1

```



Data Science and Machine Learning

Controllable AI Music Generation

Degree Final project

The project is created for my undergraduate Degree's final project. Using Python as the programming language, game background music can be synthesized according to the given domain styles. For example, if the user wishes to generate Mario styled music, the output of this Deep Learning Transformer Model will be generating a piece of music that is similar to Mario's training data.

This project is done using the TensorFlow and Trax library. The model explored is named the Reformer Language Model which is an advanced version of the Deep Learning Transformer Model.

```

main.py
download.py
abc_dataset
cleaned_dataset
cleaned_dataset_2(18-12)
Advance_Wars_cleaned.abc
Advance_Wars_Dual_Strike_cleaned.abc
Advance_Crossing_cleaned.abc
Sango_Tonoo_cleaned.abc
Sango_Tonoo_cleaned.abc
Battletoads_cleaned.abc
Battletoads_cleaned.abc
Savage_Fencer_Musashi_cleaned.abc

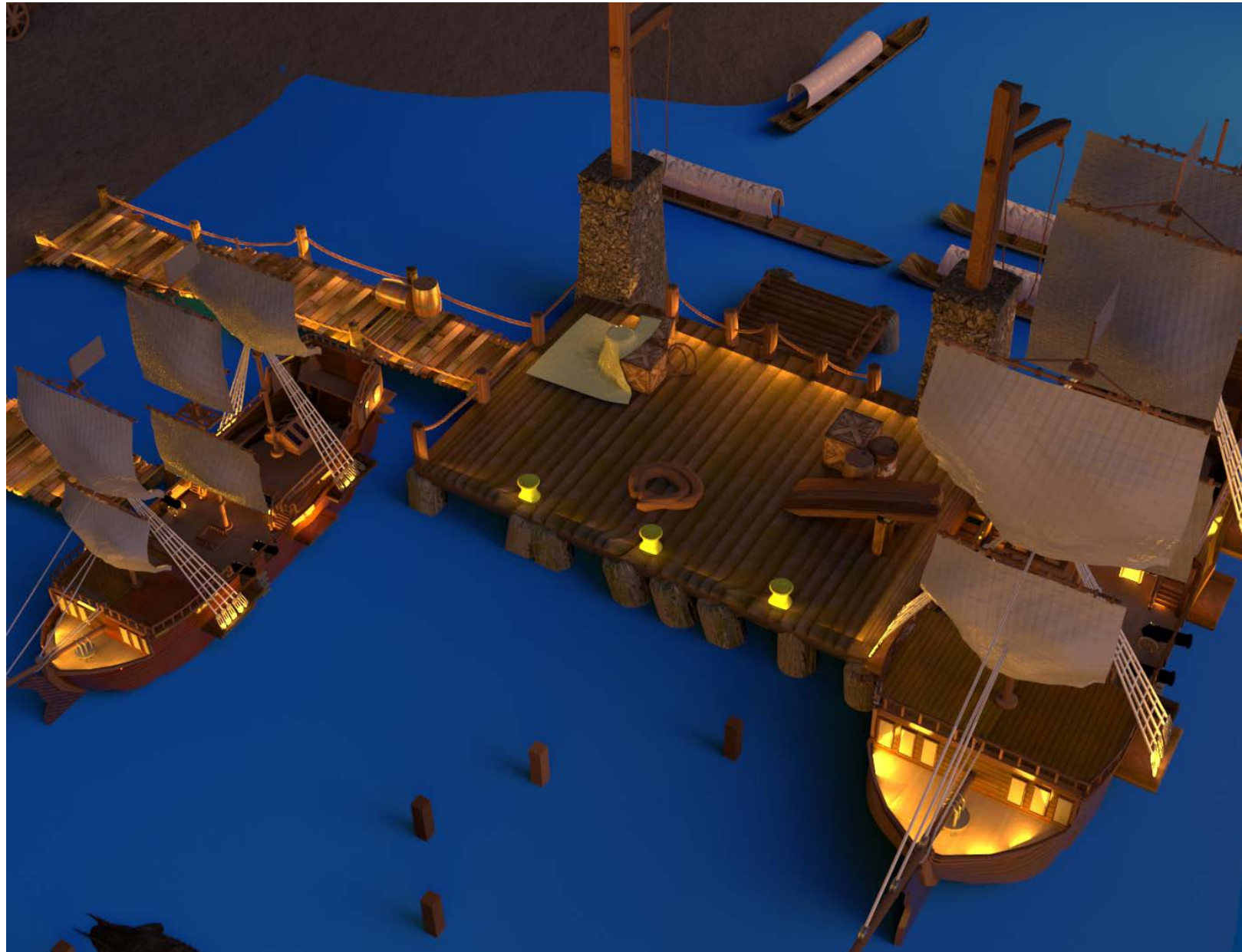
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Media

3D Modelling
3D Rendering
3D Animation
AR developement
Visual Effect

Qinwen



3D Modelling and Rendering

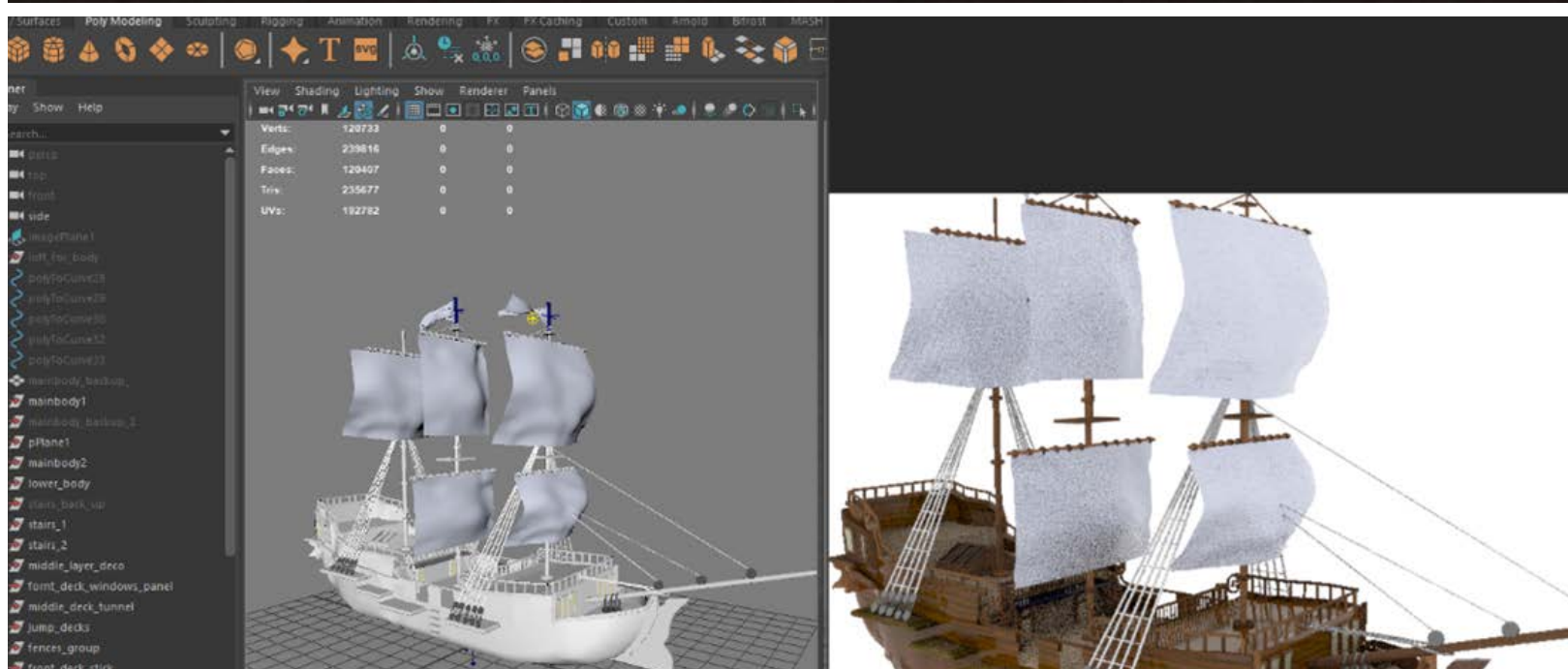
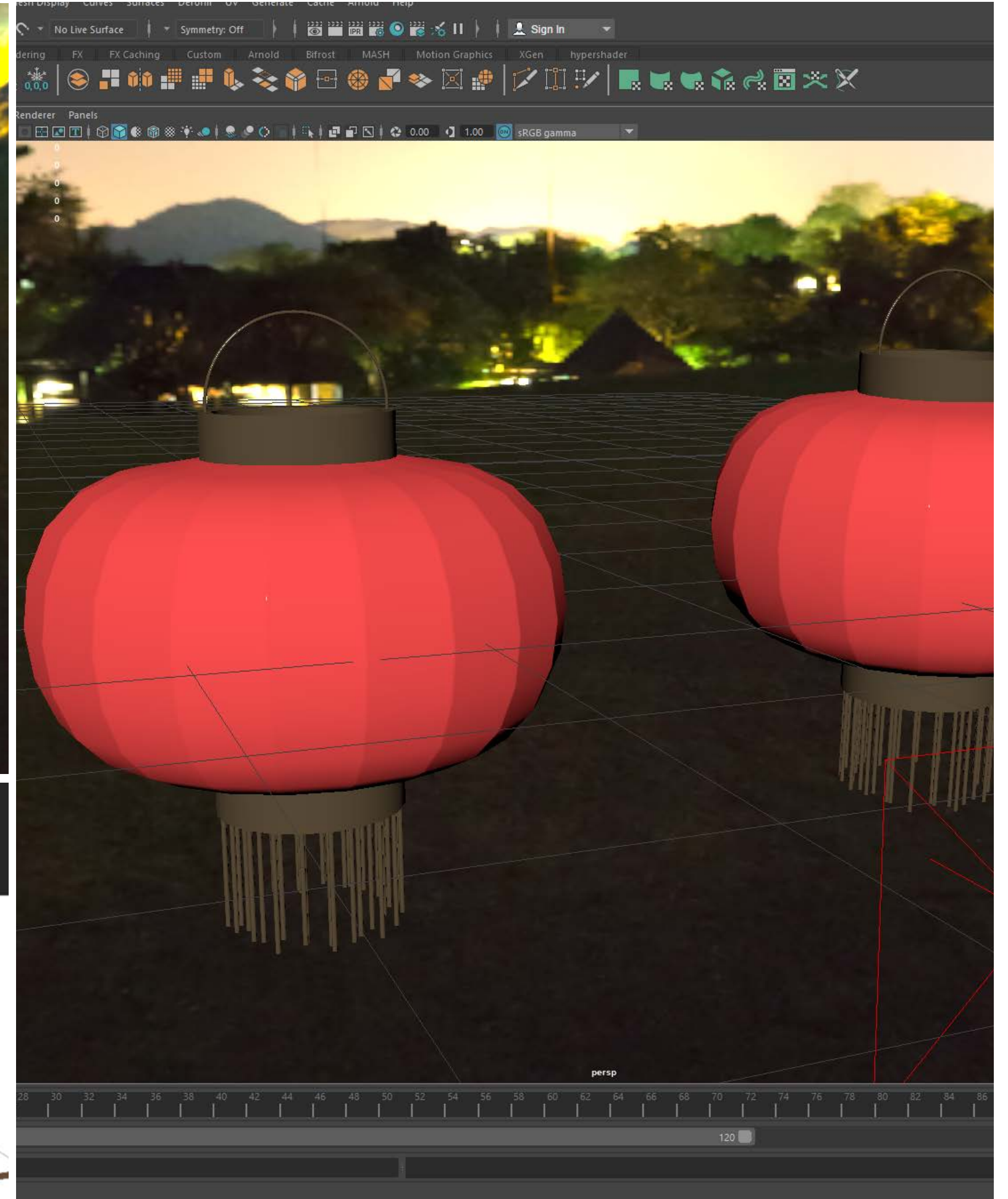
Port Town

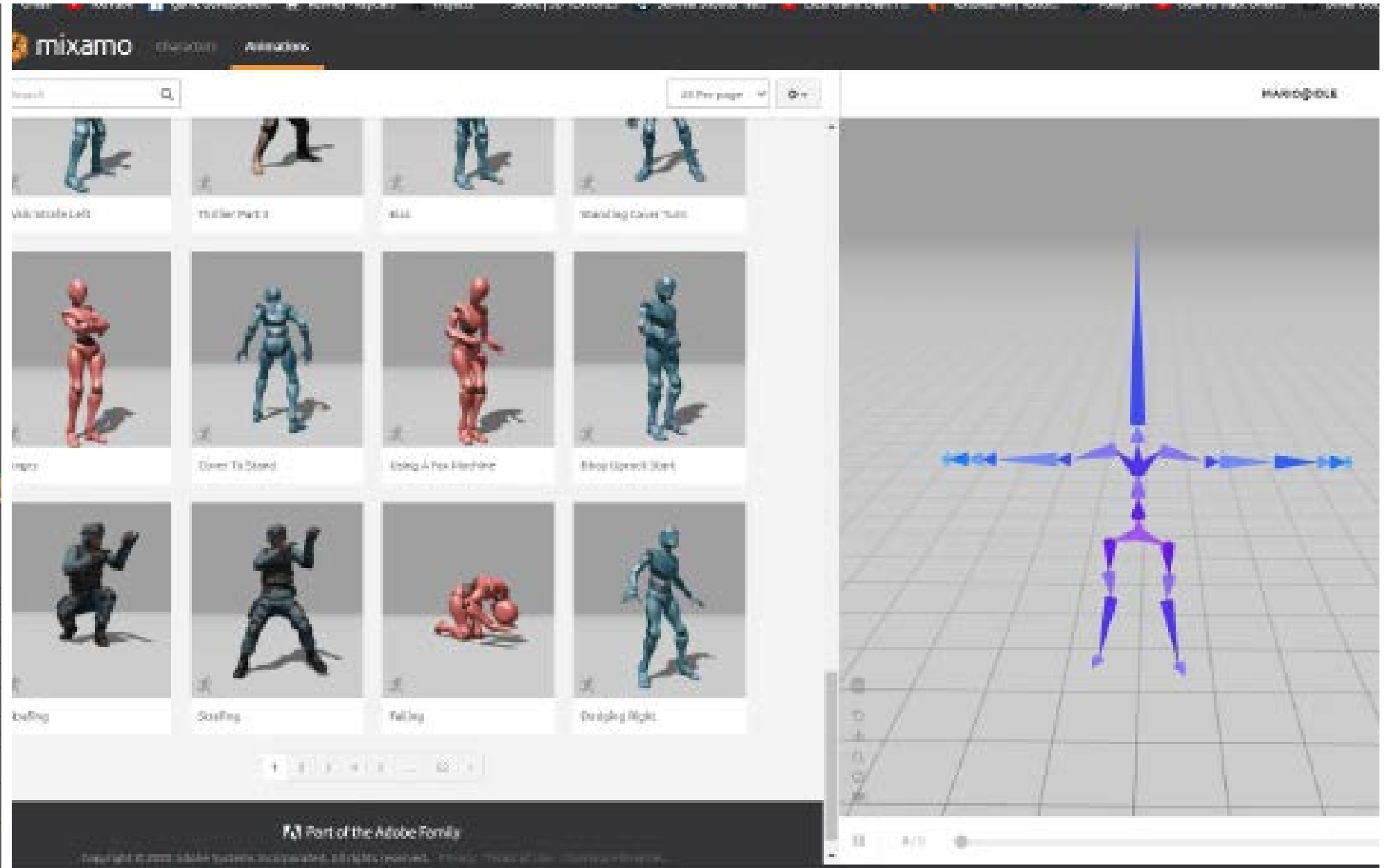
3D Modelling Final Project

The project is created in my year 3 sem 1, 3d modeling class. This class is focused on building 3d modeling and rendering skills. Working in a team of 3. We have come out with this port town concept as our final rendering outcome. This final rendering cost us RM 300 and the outcome is decent. The project is whole created in Autodesk Maya© and rendered using Arnold Renderer©.

This project work in progress details has been included on my Patreon page. In this project, we have utilized the industry workflow such as shader and Material graph. These graphs have enabled us to render a realistic material and amazing lightings effect.







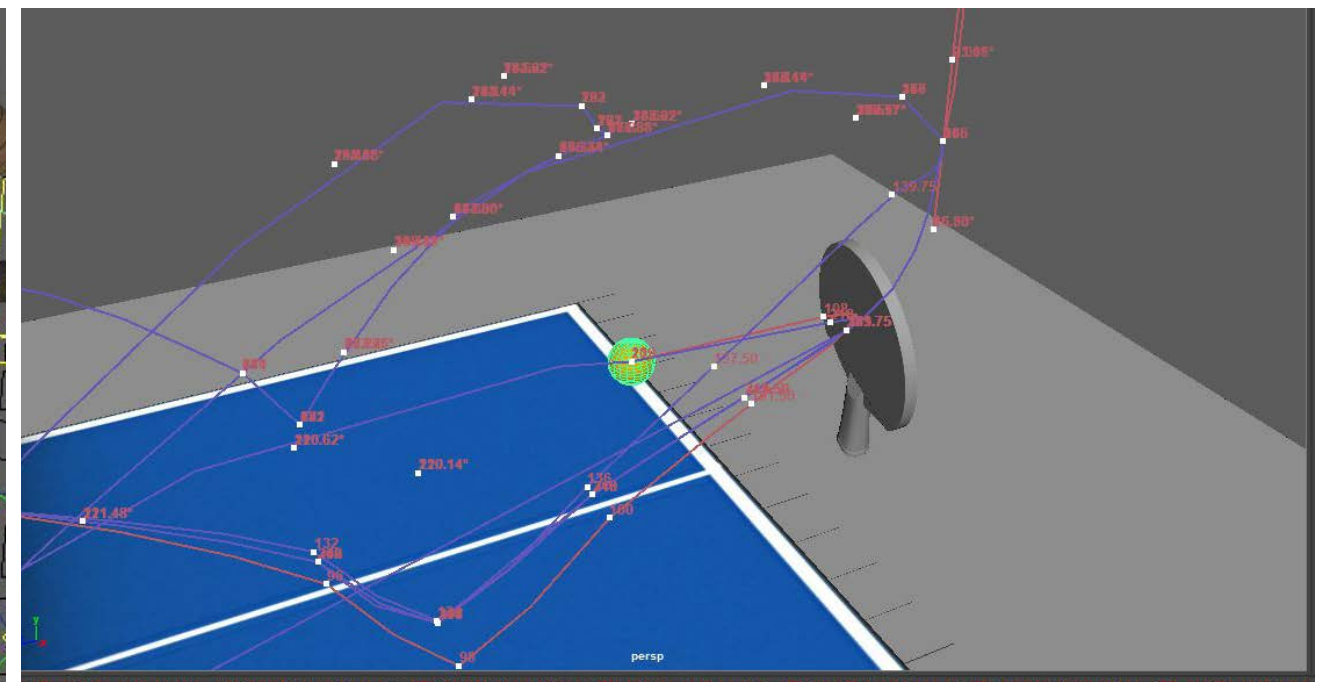
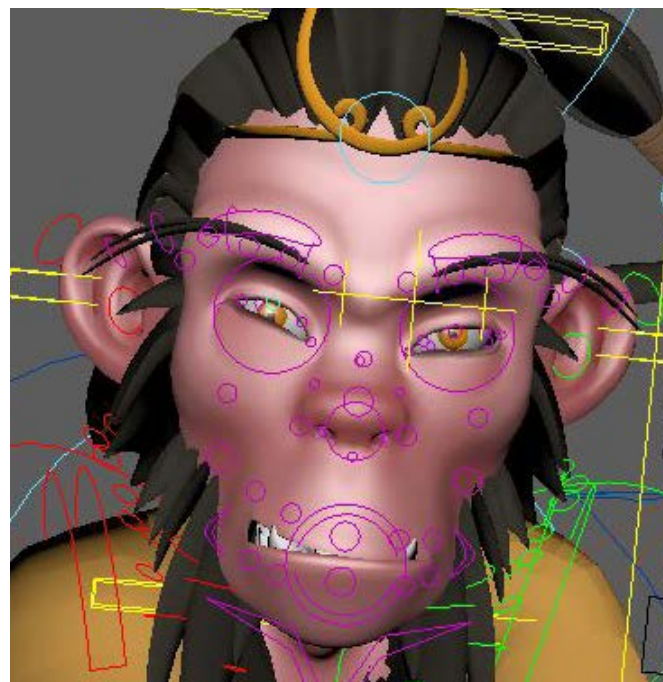
3D Animations

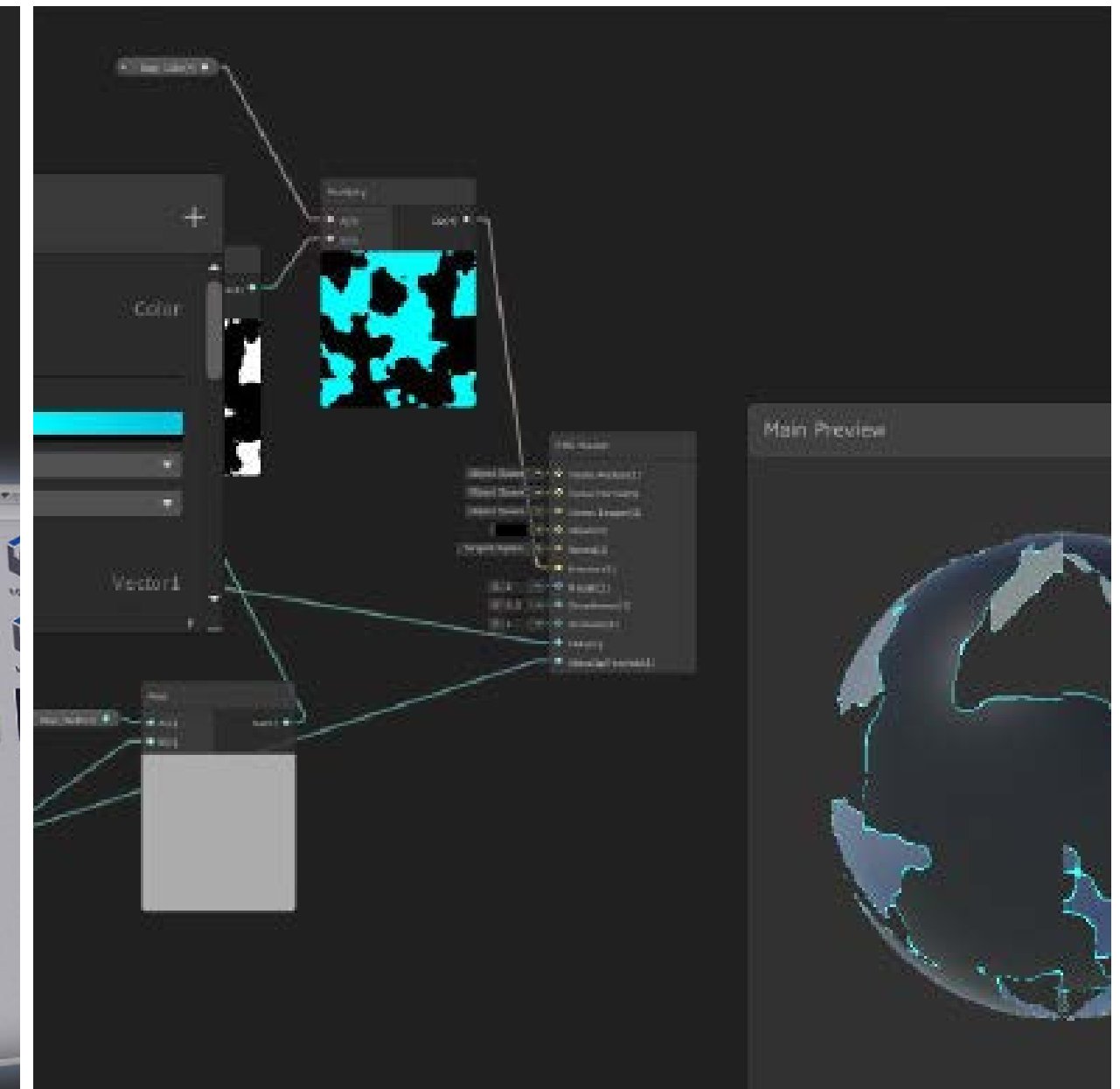
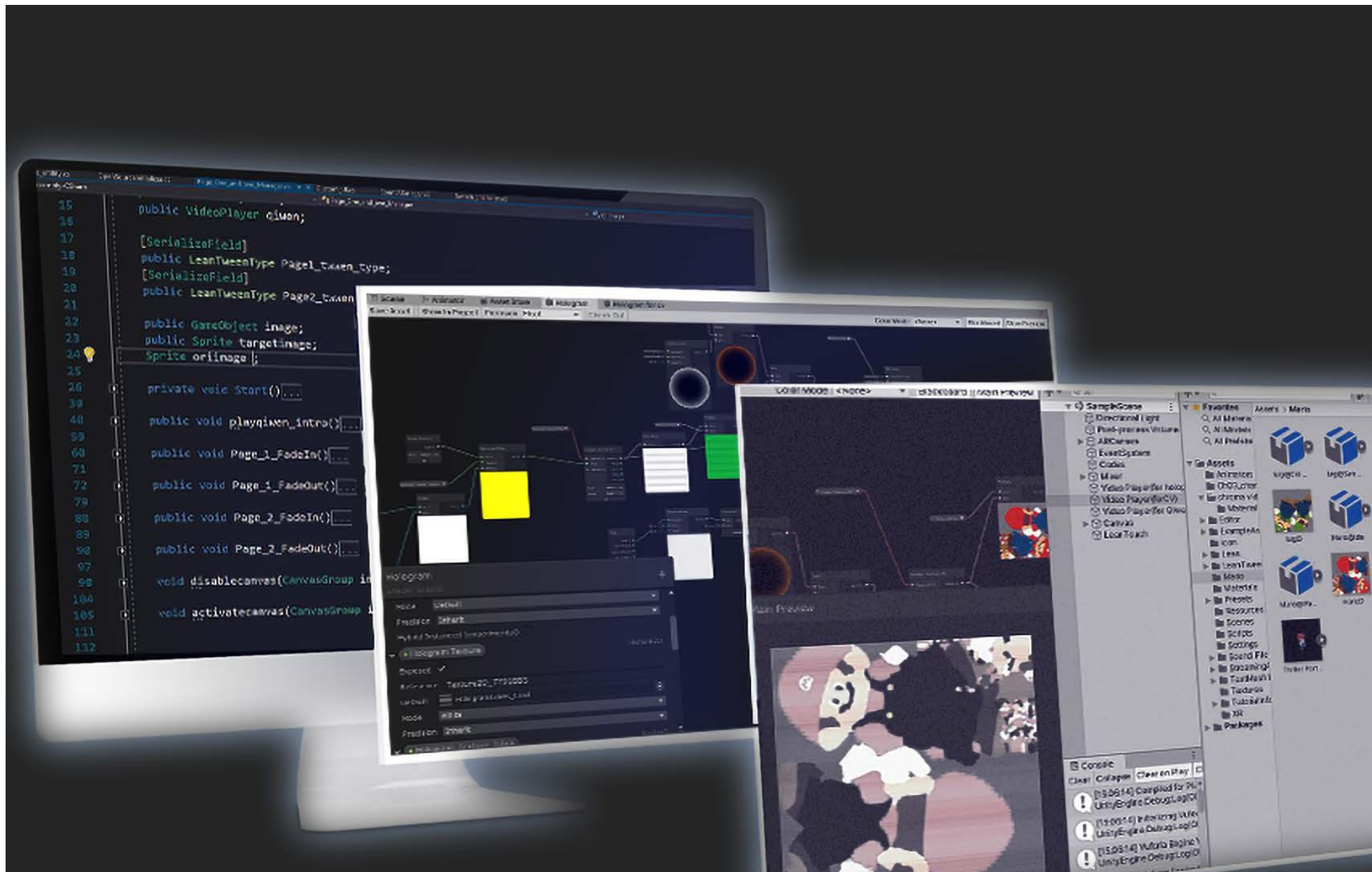
Rigging and Animations

3D Animations

3D Animation is an important element no matter in video games or digital movies. In the 3D animation course, the basics of rigging have been explored. Basics controllers such as inverse kinematic IK and Forward kinematic FK controller also has been introduced. These Controller has made the 3D model become a controllable puppet and can be animated in a humanoid way.

Objects animation has also been introduced in this course. The path animation and graph animation editor that has been utilized in the industry has also been introduced to smoothing the workflow. All of the animations done are following in accordance with 12 principles of animation.





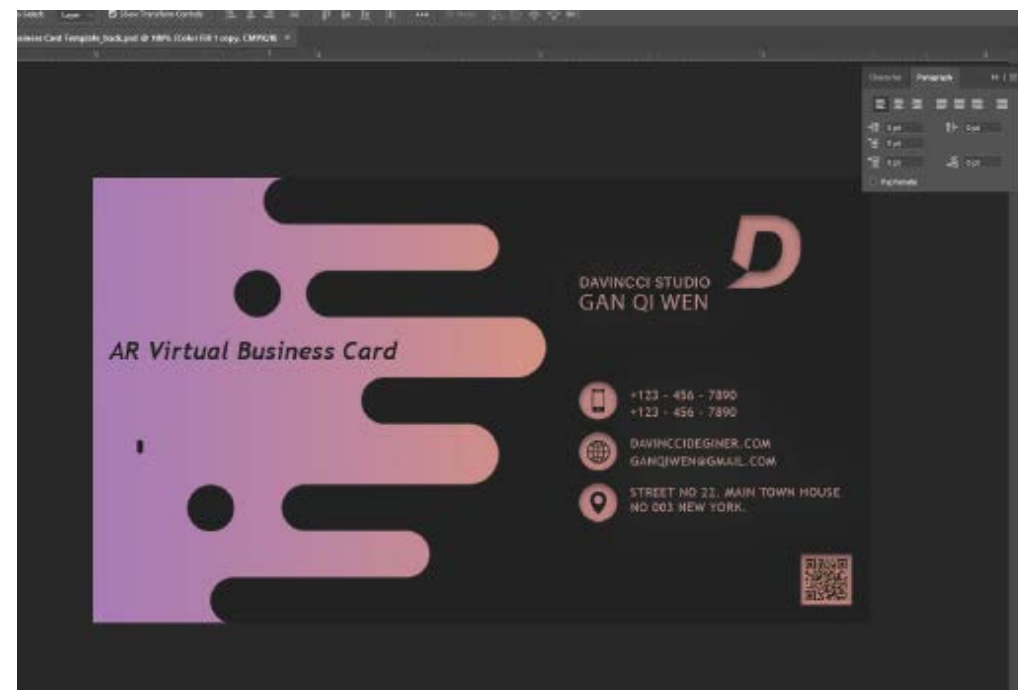
Futuristic AR Business Card

AR technology

Augmented Reality and Development

In this assignment, all of the media skills that I have learned have been integrated. For the game objects logic coding, it was fully being done with the C# script. The Universal Render-pipeline (URP) of unity has also been integrated for achieving the shader graph effect. Some of the assets like a business card and frame were prepared in Adobe Photoshop©.

Some Video graphic animation elements such as the animation of self-introduction have been shooting and stabilizing in the Adobe After Effect as well.



Futuristic AR Business Card

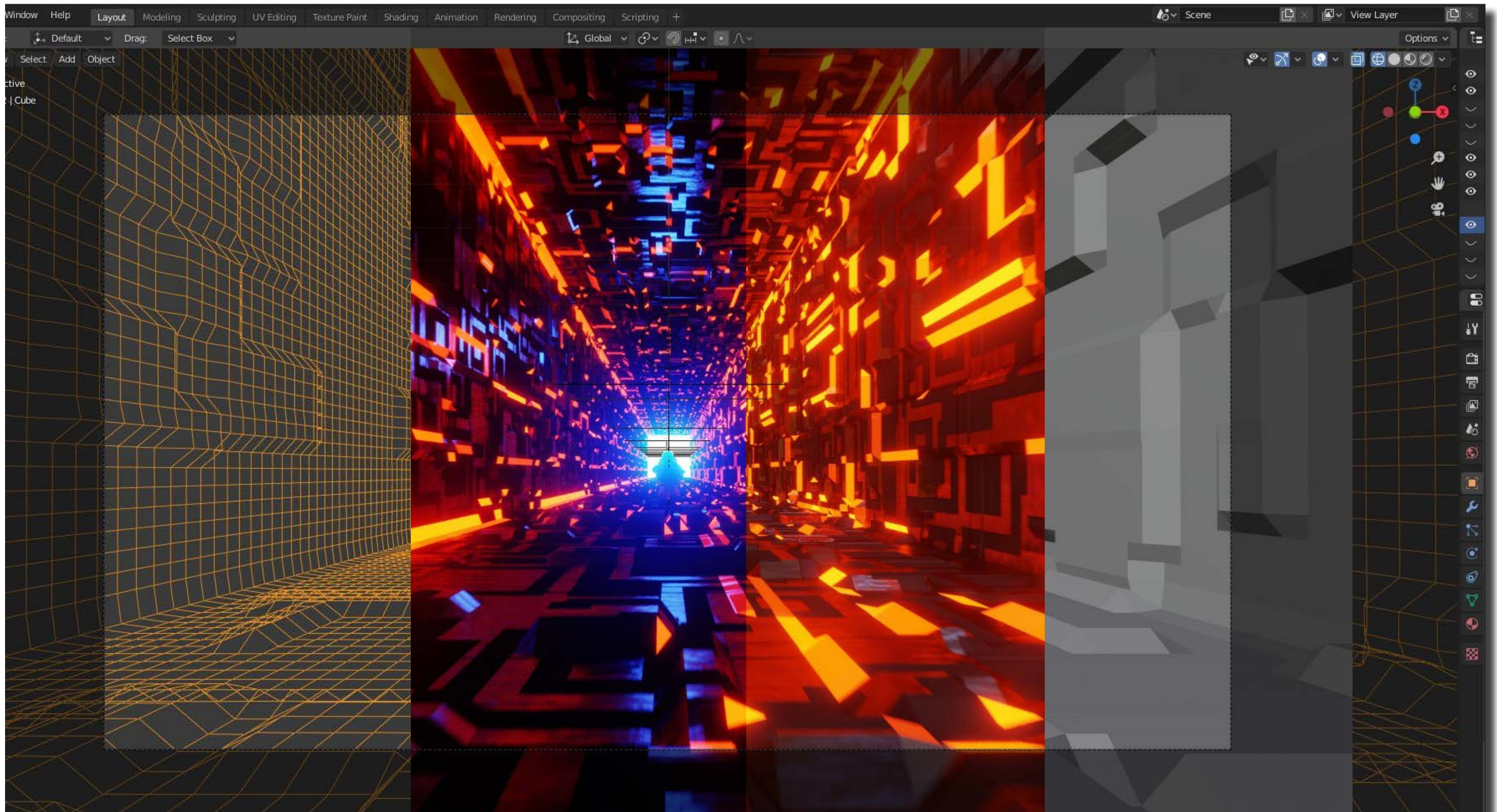
AR technology + 3D Animation

Augmented Reality and Development

AR Development using unity, Vuforia engine involving 3D modeling process, texture mapping, 3D animation, shader preparation, logic coding, error testing VFX, SFX, and UI designing is just like shooting a cinematic movie. It is a procedural process and has to go through steps by steps which starting from the ground to the roof.

Although there is still a lot of improvement space for this project, I am satisfied with the result. Extra efforts have been done by me in terms of user interface (UI) design, asset creation, lighting, and post-processing throughout the assignment.

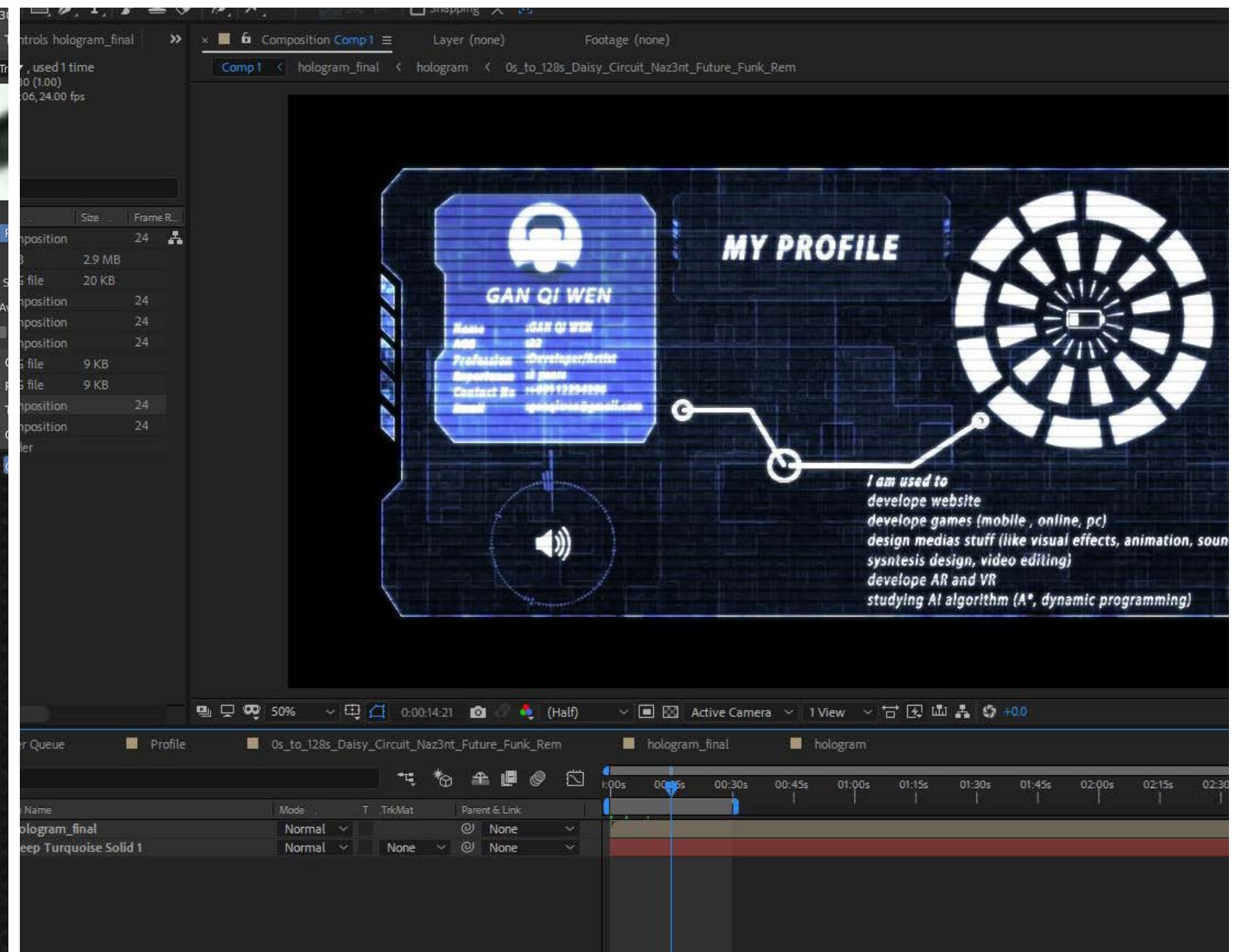
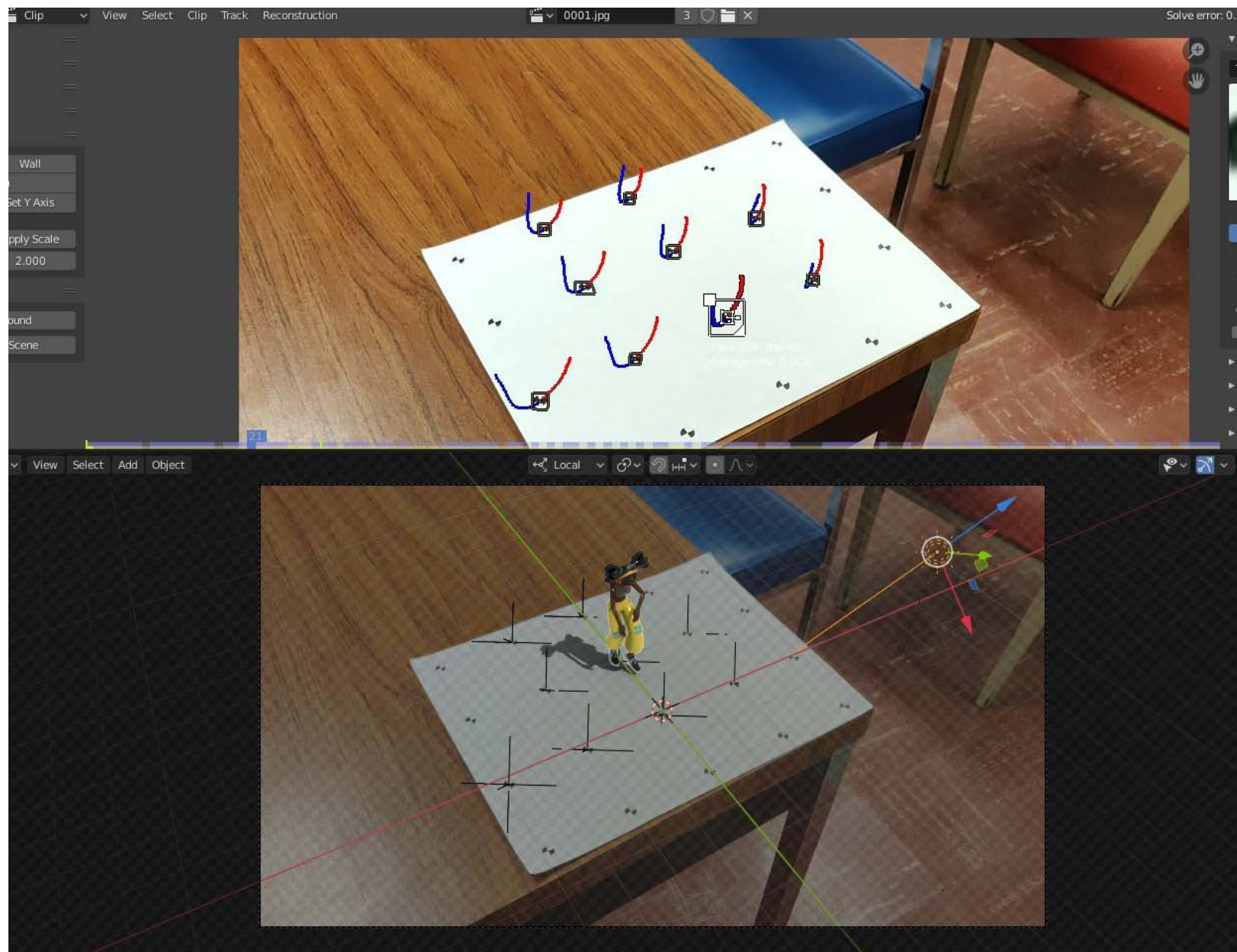




Loops Creation Process

Modelling, Texturing, Lighting and Animating

Whole process is done in Blender ©.



Visual Effect Creations

Digital Synthesis

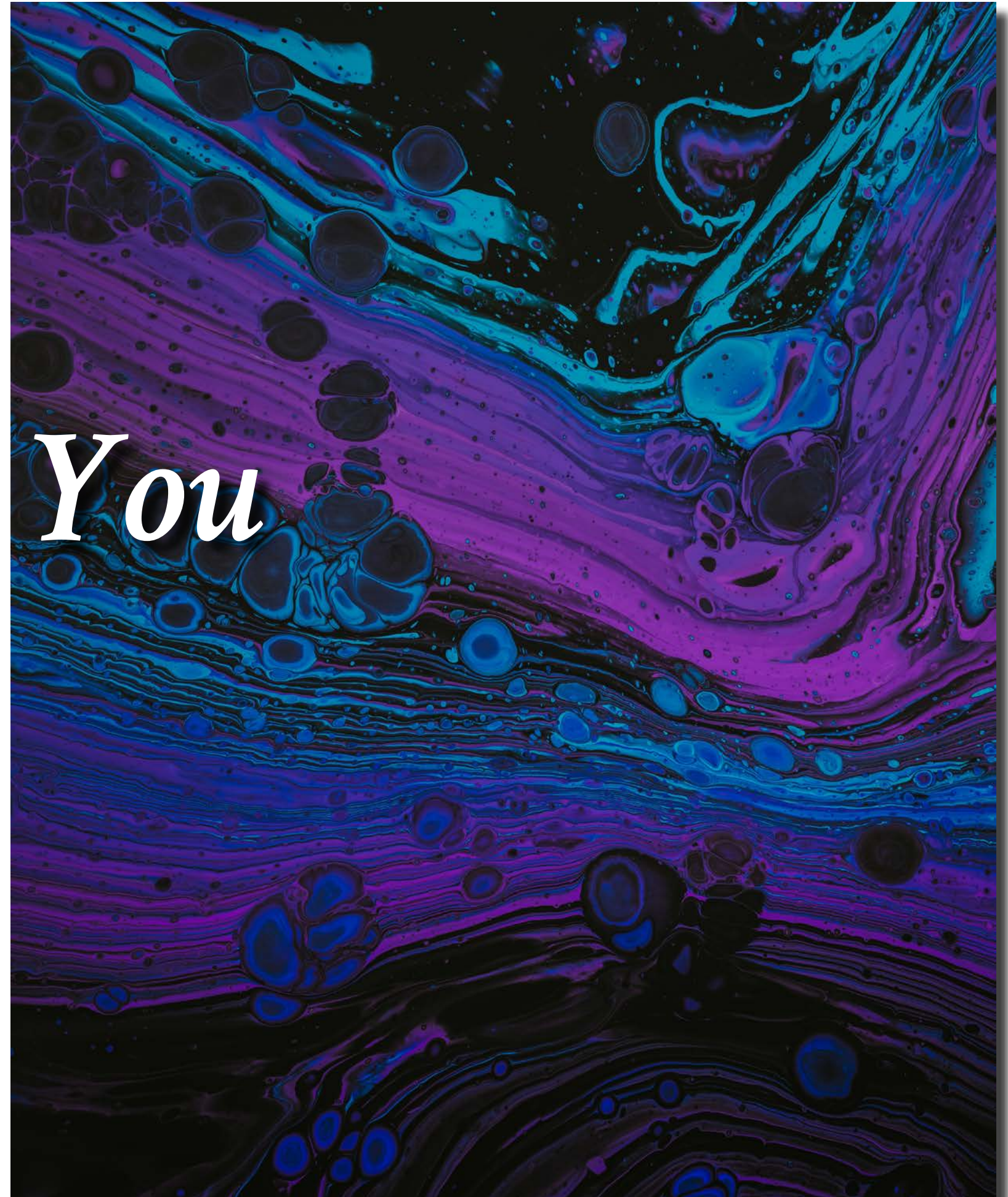
The Beauty of Post-Processing

Digital Synthesis is an important subject to understand all the cutting edge technology like tracking and stabilizing. These are all the fundamental concept for realizing mixed reality effects. However, due to the technology constraint, humans still need to do it by hand as it requires skills. Nevertheless, good and mature digital synthesis and post-processing skills have been developed throughout the Digital Media Technology Program.

In the Digital synthesis and Design, Adobe After Effect®, Blender®, Final Cut pro®, Adobe Premiere Pro® has been utilizing for the tracking, synthesizing, coloring and correction. In the end, all of the effects have been greatly achieved.



Thank You



Qinwen