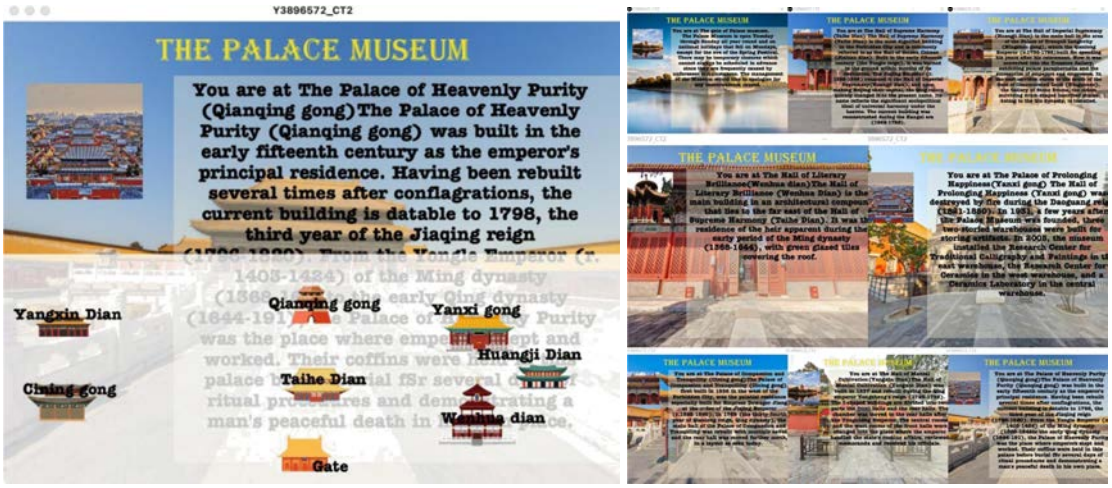
Guangze Dan portfolio

1. The Panoramic Palace Museum:

For this project, I developed a page-based museum exhibit drawing inspiration from the Forbidden City in China. I employed a combination of page-switching, music integration, and orientation adjustments to design a museum model that enhances accessibility for visitors. The museum allows for navigation in multiple directions, offering a multifaceted interface that accommodates both mouse and keyboard inputs. Additionally, the incorporation of music loops complements the entire museum system, introducing a unique experience akin to visiting the Palace Museum.



The figure of museum exhibitions

Notice: this project is built and run in processing 3, please open this project in processing 3 in case bugs appear.

Link to this project:
https://drive.google.com/drive/u/0/folders/166Rf-k8ZscPCAOWiVC-WvYyAVefXlHod

2. Interactive Media Group Project - Student Roamer:

For this group project, I developed 'Student Roamer,' a website designed to assist students in finding and booking budget-friendly holidays. The website offers several key features, including a randomizer function, a map section, and a user-friendly search and sorting interface. These features enhance user engagement and interactivity, making the website both attractive and efficient. By combining these elements, we've created a highly accessible platform that caters to our target audience – students who generally prefer simplicity over complexity. Our project, which involved extensive research, design, and technical implementation, has successfully achieved its goal: centralizing data to provide cost-effective holiday options for students.

Figure 1 - Colour Palette

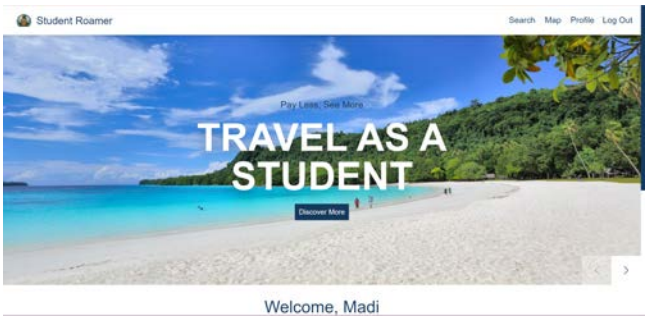


Figure 2 - Home Page

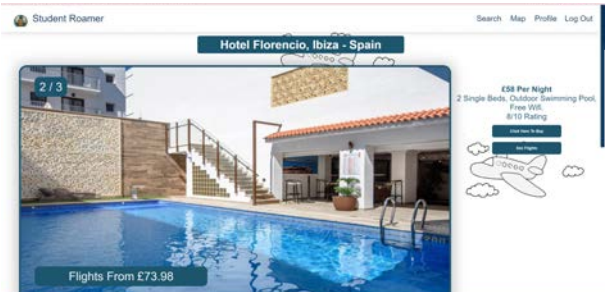


Figure 3 - Hotel page

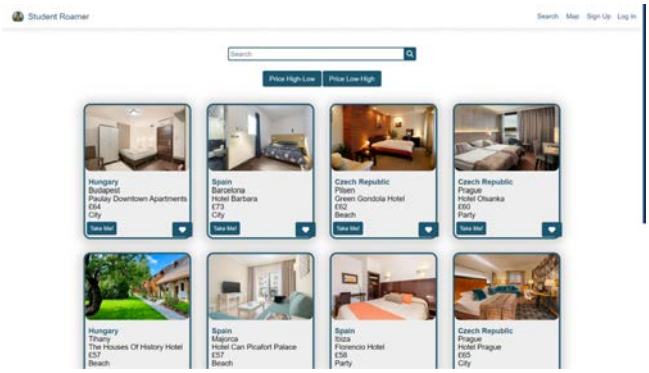


Figure 4 - The search page design

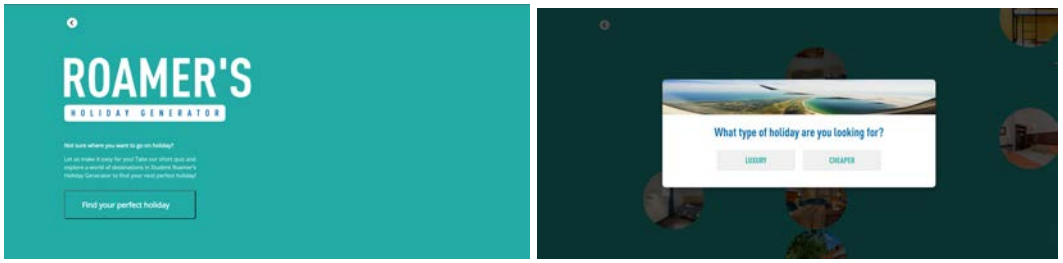


Figure 5, 6 - Finalised randomiser

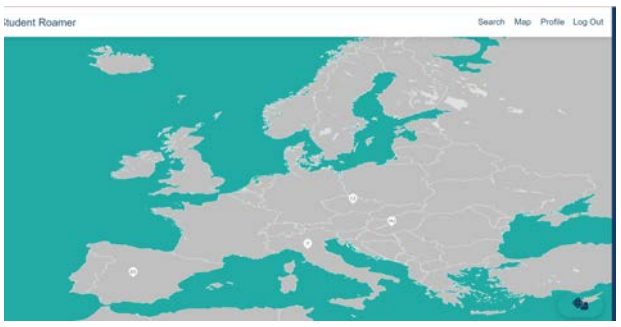


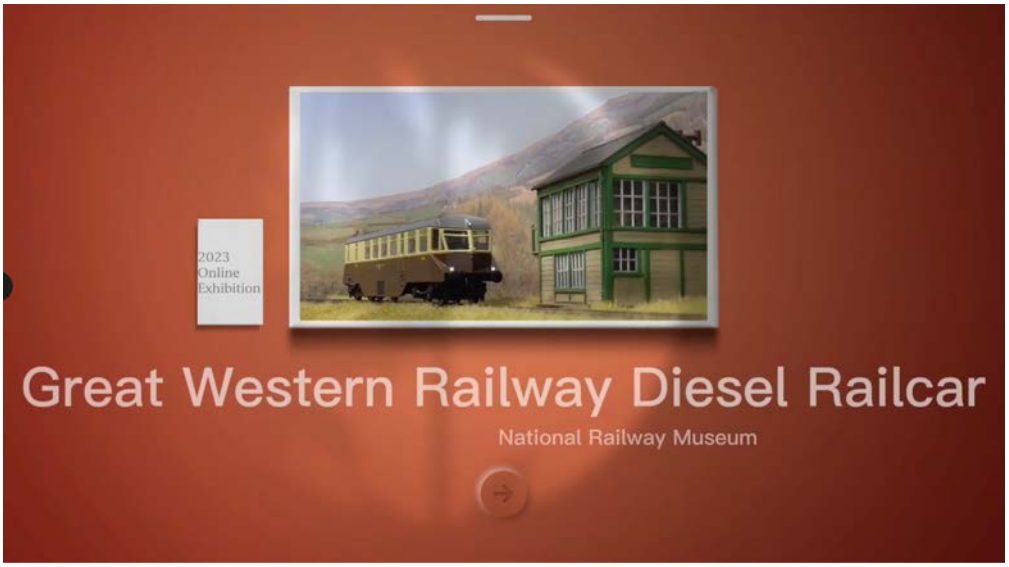
Figure 16 - Our map page (featuring a link to the randomiser through the dice button)

Link to this project:
Direct link: http://tradersnet.co.uk/StudentRoamer/Code/index.php
Google Drive:
https://drive.google.com/drive/u/0/folders/1RxKA4um63JqTMNYvBBoE0mlq7aFmXe6W

3. Interactive Storytelling for National Railway Museum Exhibit:

The National Railway Museum, a renowned British attraction, is home to an extensive collection of historic railway rolling stock and related artefacts. In recent years, there has been a significant use of multimedia technology to enhance the visitor experience, attract more patrons, and provide a novel way of conveying information. While many museums have adopted multimedia information desks to educate visitors about exhibits and cultural events and provide insights into special exhibitions, the National Railway Museum has yet to fully embrace this multimedia experience.

This project is dedicated to promoting the National Railway Museum, with a specific focus on the Great Western Railway internal combustion locomotive. The primary objective is to encourage visitors to engage more interactively and entertainingly with the exhibits. Drawing inspiration from renowned institutions such as the Louvre, the interactive game Phoenix Wright: Ace Attorney, and the international art installation 'Cold Dark Matter: An Exploded View,' this project seeks to provide a deeper understanding of the history and stories behind each train. It achieves this through the use of multiple-ending games that create an enjoyable and engaging experience. By doing so, visitors are not only guided to explore other exhibits but also foster synergies between them.



The figure on the main page

Link to this project:

https://drive.google.com/drive/u/0/folders/1__9bVjRQbtb6-kuUdV-A7dRqTah5inFX

4. YUN House:

The purpose of this website is to advertise a restaurant called YUN House. Customers will be able to make reservations and place orders online, as well as discover information about the restaurant. In addition, customers can perform games on the website and provide feedback regarding their dining experience. The content is heavily influenced by Restaurant Gordon Ramsay, but the website promotes a general restaurant, and too much information is sometimes presented on the same screen, making it difficult for customers to locate the information they seek. The non-hidden navigation bar causes the site to be somewhat out of proportion, so the website has been modified to resolve this issue.(Pernice and Budiu, 2016)

The website is divided into several sections, with the special interface being the most distinctive. The site's aesthetics and design are intended to be clean and modern, with green as the primary colour throughout the site. This colour choice is environmentally friendly and comfortable for the customer's eyes. To avoid distractions, the website uses silence and large buttons.

The design background and restaurant concept have been combined to create an attractive website for the restaurant.

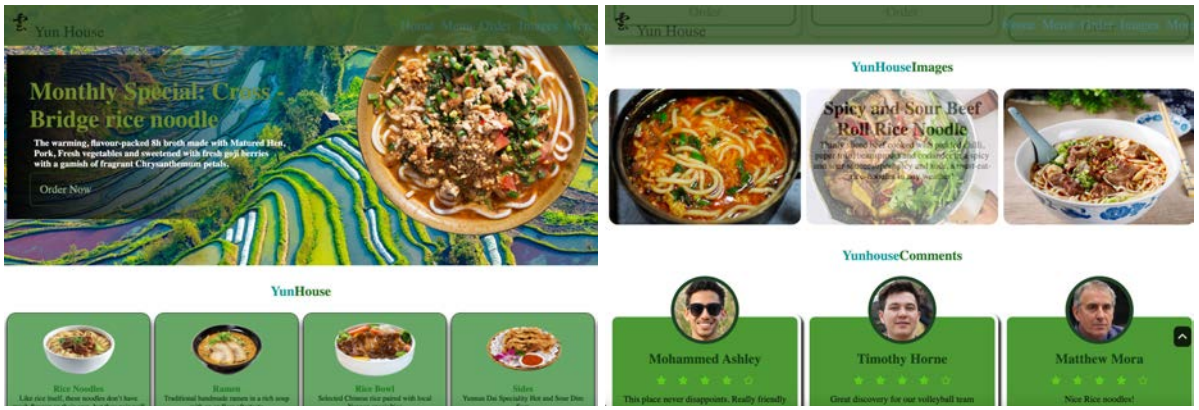


Figure 1, 2 - The Home Page

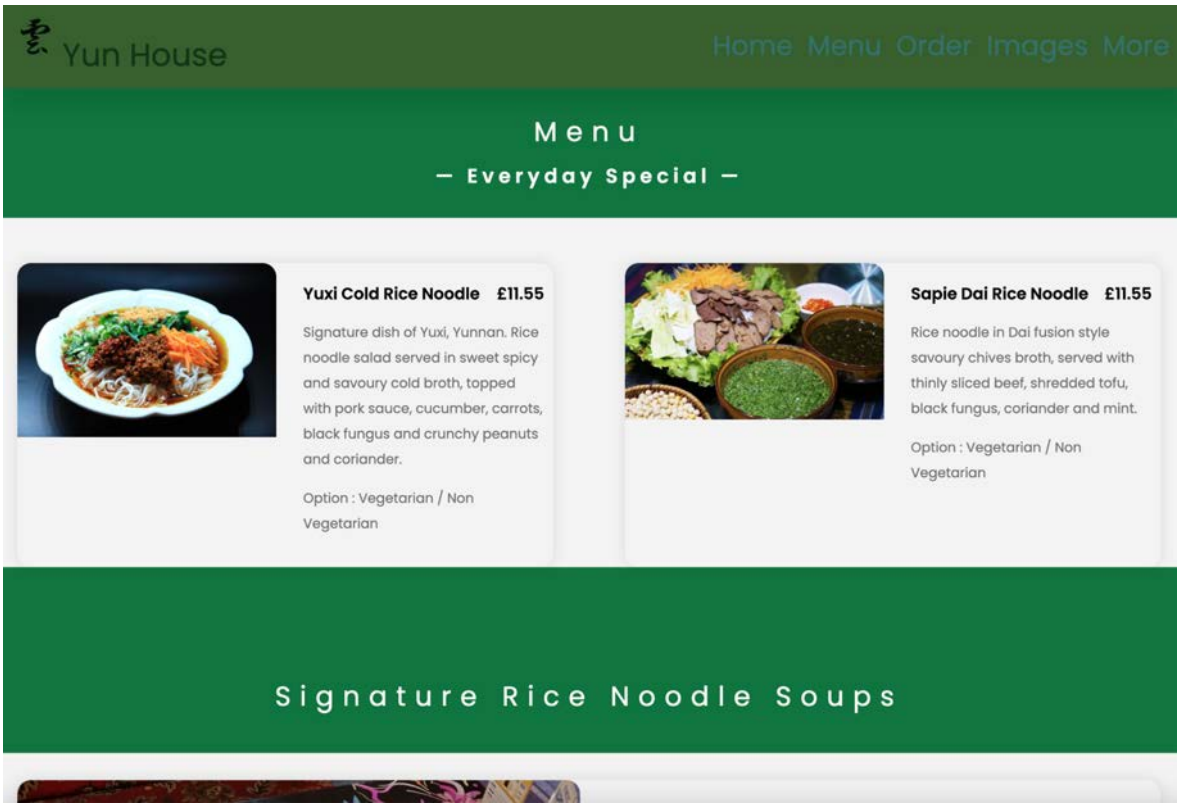


Figure 3 - Menu Page

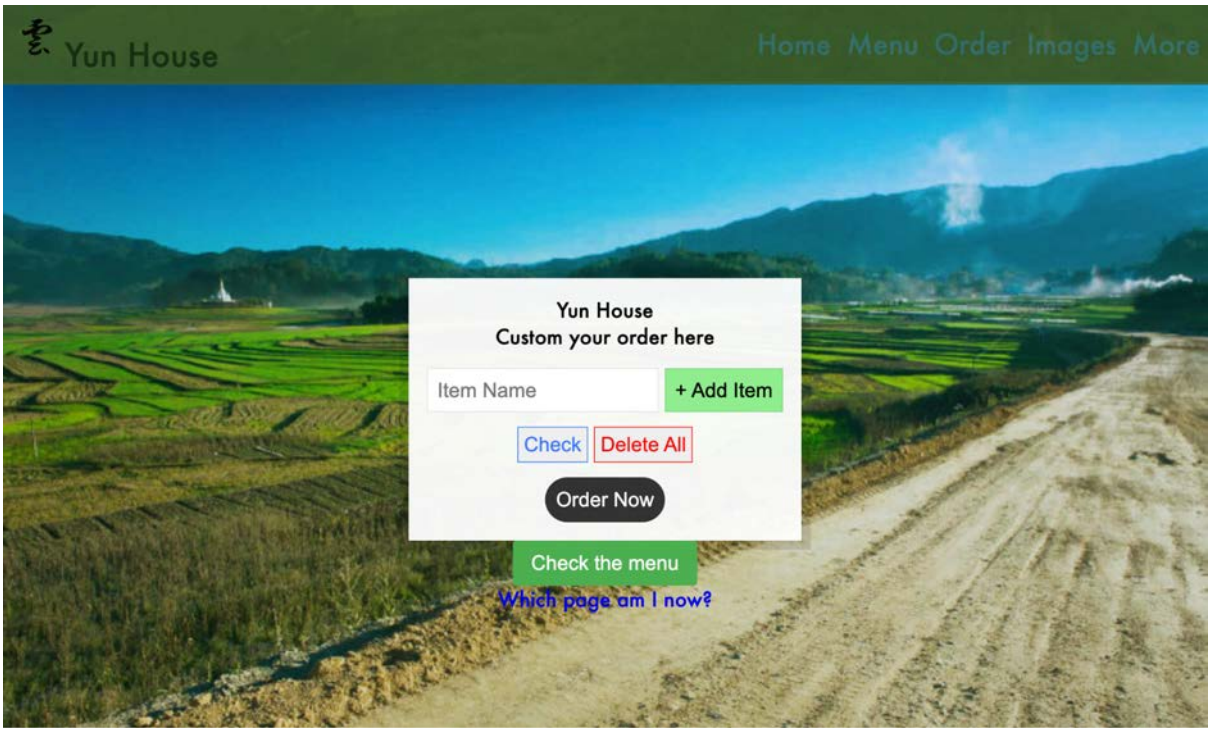


Figure 4 - The Order Page

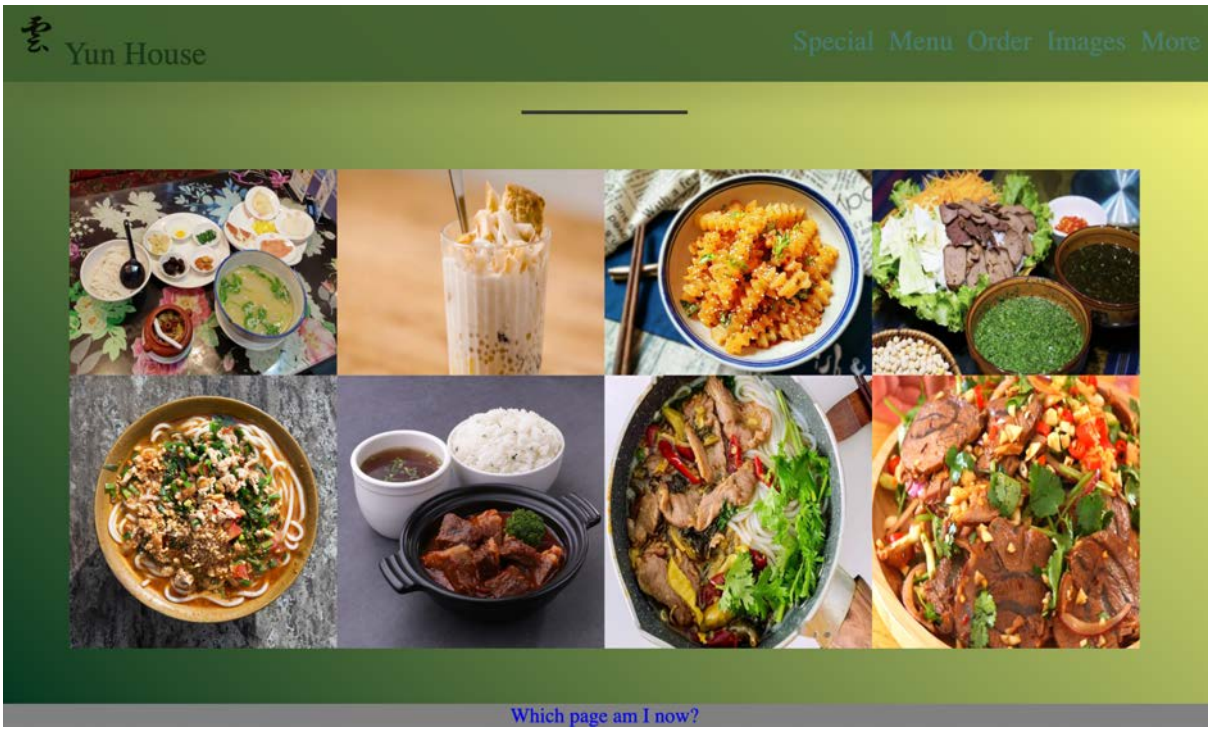


Figure 5 - List of Images

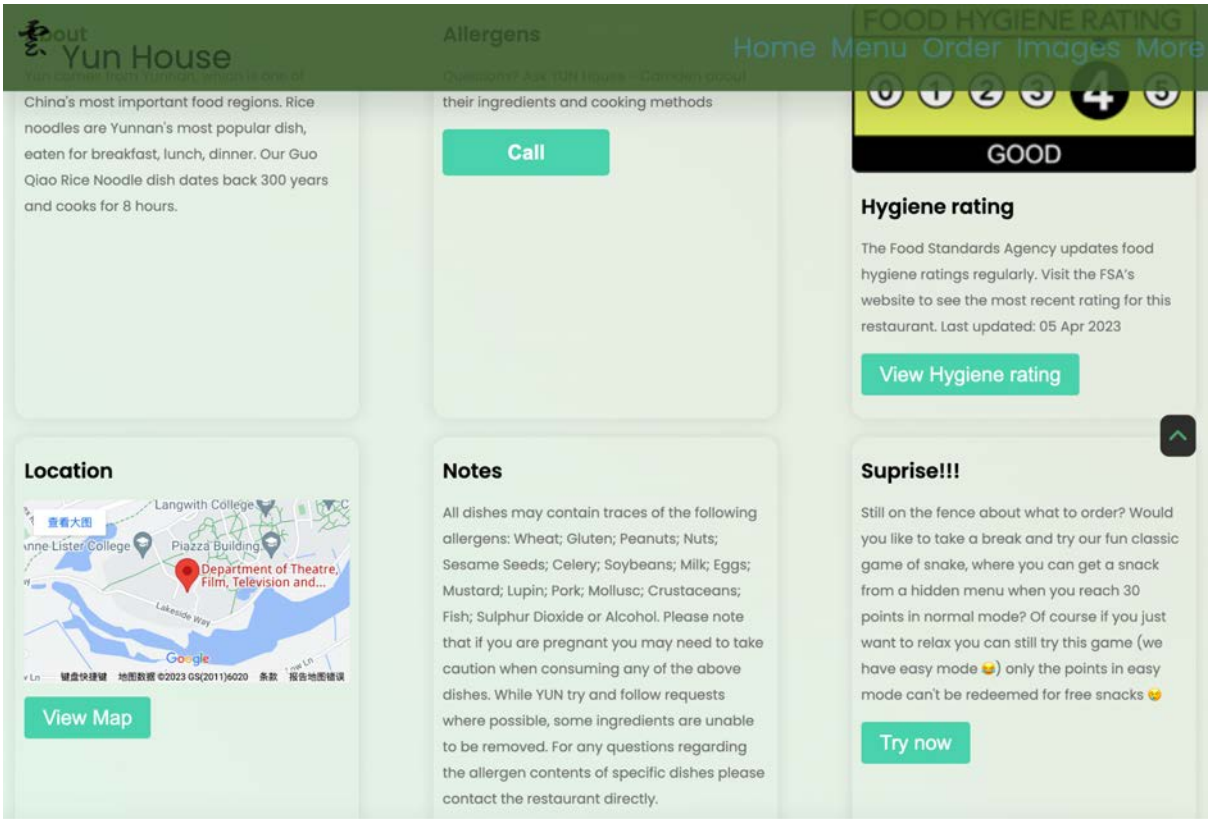


Figure 6 - More information

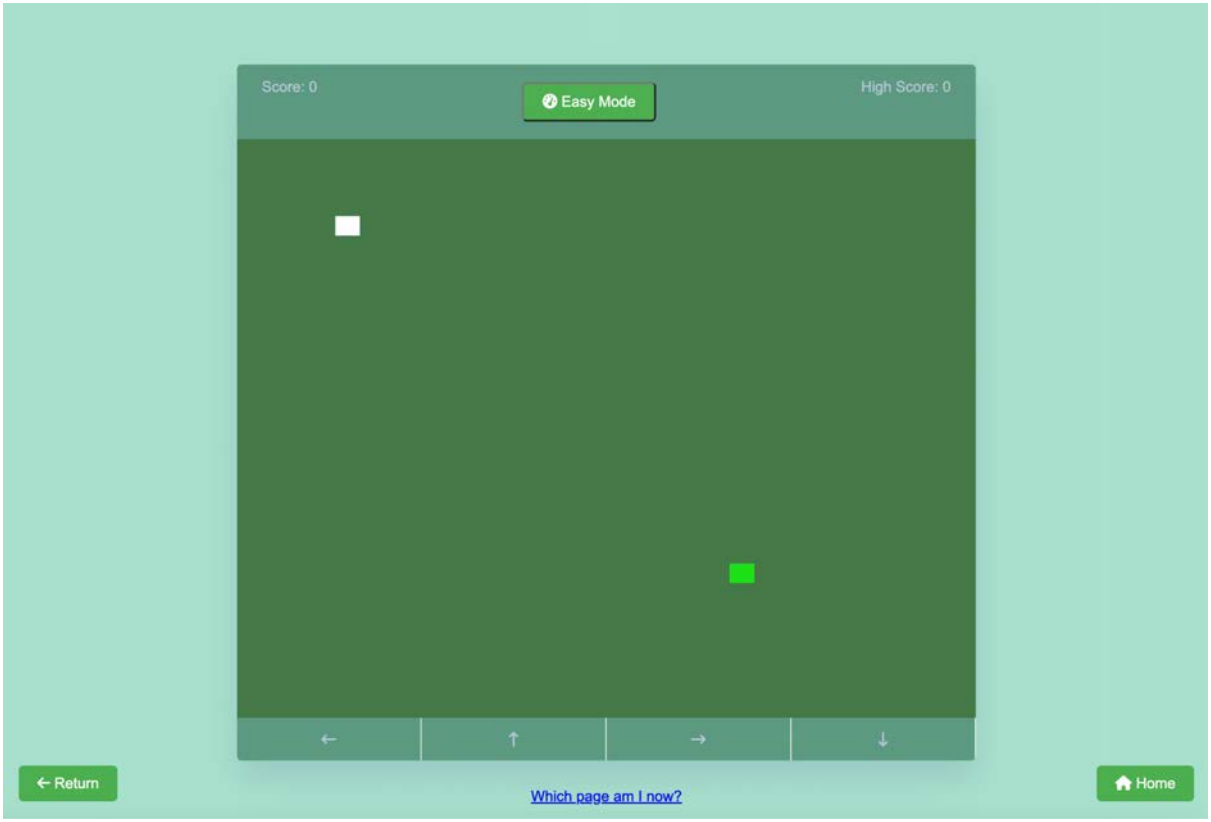
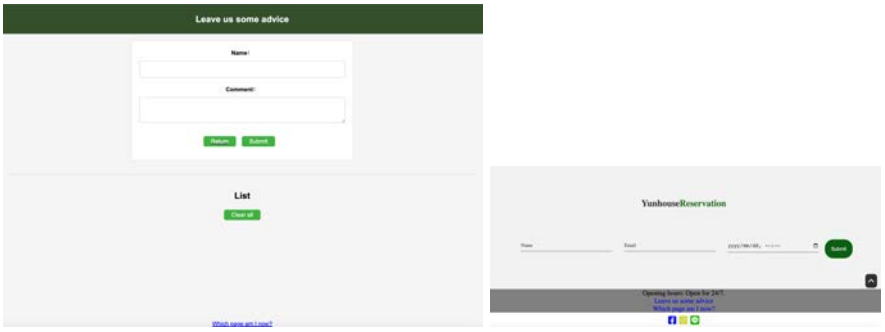


Figure 7 - Fun game on this website



Which page am I now?

Figures 8, 9, 10 - Accessibility on website

Link to more feature and assets:
https://drive.google.com/drive/u/0/folders/1C-P4CahlLnAnWAMyjPW13zCeGjltGAQj

5. Life In A Day:

I created a game called Life In A Day. I chose a simulator like Escape Room to simulate a day in one person's life. The story takes place in a separate house, where the player has to collect and use specific props, answer questions and finally complete the entire quest process. I chose to create this environment in part due to Escape Simulator, which is a first-person puzzle video game developed by Pine Studio and released on October 19, 2021. This first-person perspective is much more immersive than other perspectives.

So my game has several similar features, such as a unique UI introductory screen at the start of the game, a quest menu that opens during the quest to check the completion of the quest (which is updated in real-time as the investigation is completed), in-game reminders, and interactive quiz sessions. Unique in-game sound effects such as when approaching a stove or a tap, and various sound effects during interactions (e.g. opening and closing doors) add to the overall immersion of the game. There are some challenging points in creating the entire environment such as how to display the progress of the quest in real-time and how to pop up specific text content when the quest status is triggered. This resulted in a complete game environment being designed.

Figure 1 - Home Page

Figure 2 - TaskInfo

Figure 3, 4 - In-game picture

Figure 5, 6 - Question element

Figure 7 - More game design

Link to more features and assets:
https://drive.google.com/drive/u/0/folders/1zu9rQKune70u0tE3bSqu0x6QbEcUDK3D

This project is created based on the Unity LTS Release 2021.3.9f1 environment.
Please carefully read the "Read Me" doc in the Google Drive.

6. My Titan Wiki:

This website aims to promote a first-person shooter game developed by Respawn Entertainment and Electronic Arts, to attract viewers to explore similar gaming experiences. The Titanfall Wiki and the Apex Legends website serve as primary sources of inspiration. The former site offers a comprehensive presentation of its content, while the latter focuses on straightforward game promotion and introduction.

My website combines elements from both approaches. It features a sleek and modern design, providing an accessible and engaging introduction to Titanfall 2, along with a detailed explanation of the game. To facilitate user immersion in the gaming experience, we have opted for a user-friendly design without complex features like background music.

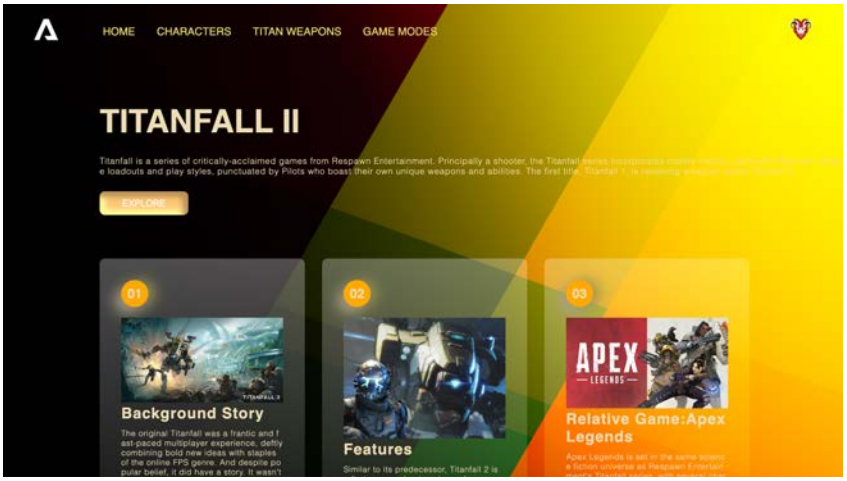


Figure 1 - Home Page

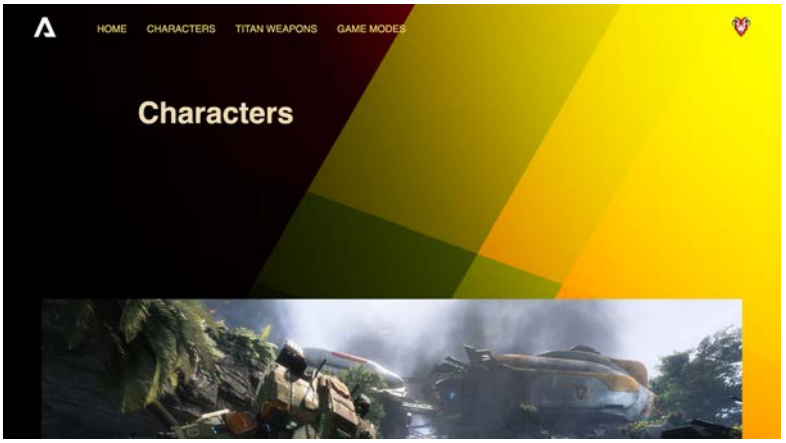


Figure 2 - Characters

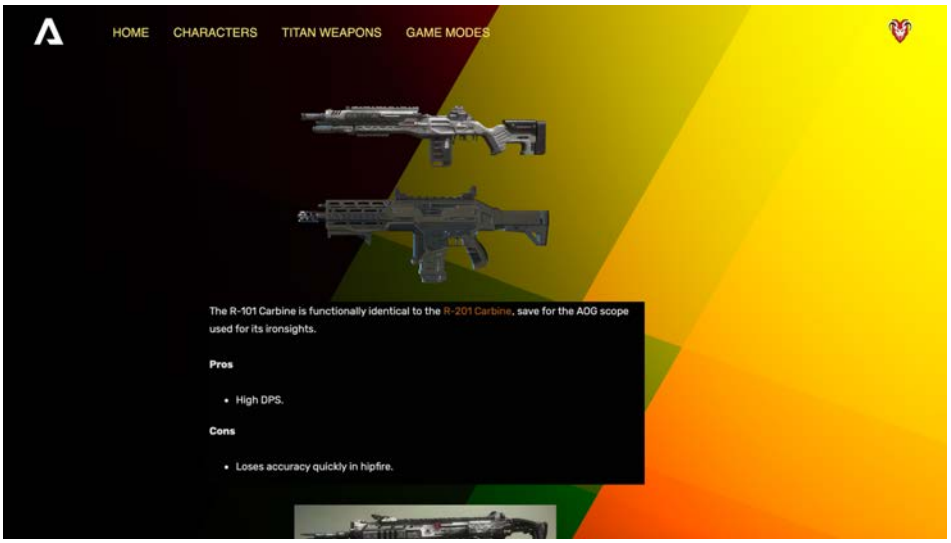


Figure 3 - Weapon information

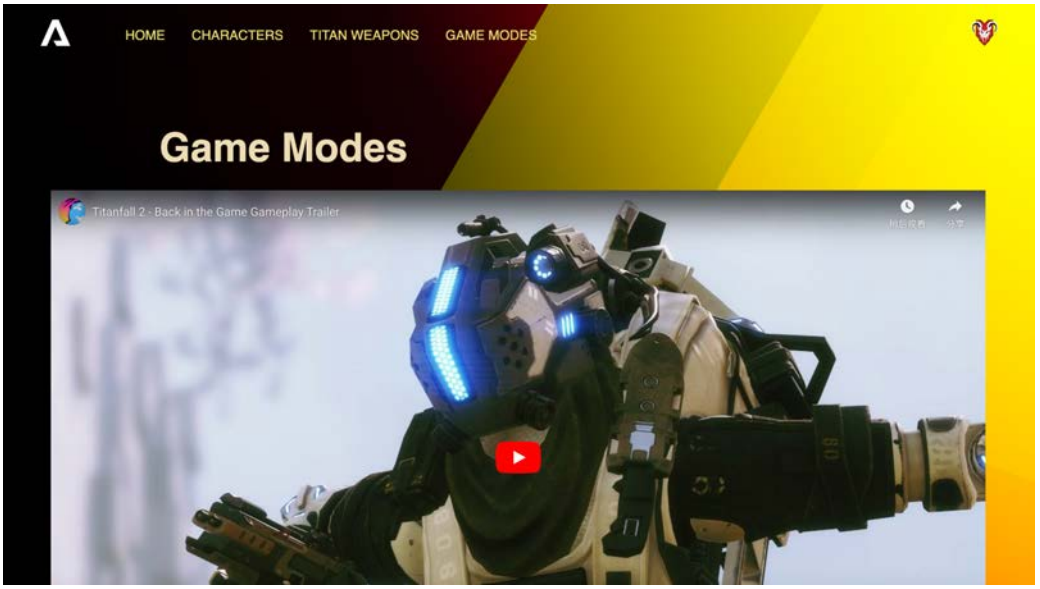


Figure 4 - Game Modes

Link to more features and assets:
https://drive.google.com/drive/u/0/folders/1o_XznoW8UTjul4i6uEMpHzgBeZeENoo3

7. Mario Squash:

This is an innovative Mario-inspired 2D game based on the Mario-inspired platformer, Mario Squash. Mario Squash is a classic squash game but with some fun Mario elements. Players will control Mario to bounce the ball and hit it to destroy enemies.

There are some interesting designs in the game:

Looping of the frames creates an animated effect: Using the looping technique of the Processing platform creates smooth animation effects for the characters and objects in the game, which enhances the game's visual appeal.

GIF design to add motion: Incorporating GIF images can introduce more motion and liveliness to in-game elements, providing players with a richer gaming experience. This can include character animations, explosion effects, or animations for other game elements.

Highly Mario-inspired background music: Incorporating background music in the style of the Mario series enhances the game's atmosphere, offering players a sense of familiarity while reinforcing the connection to the Mario theme.

Selectable and Transformable Characters: Allowing players to select different characters that can transform during the game adds variety and strategy to the gameplay. Different characters may possess distinct special abilities or traits, adding depth to the game.

Creative defeat effects: In-game special effects and defeat animations contribute to the visual impact of the game, leaving players with a satisfying experience. These effects may include explosion animations, particle effects, or other creative animations that enhance the game's entertainment value.

Same Screen Battle: Players can use the keyboard's WASD and arrow keys to control both characters to battle against each other!

These design elements come together to create Mario Squash, a unique and engaging game that offers players an exciting Mario-style squash experience. This game will appeal to fans and gamers of the Mario series while providing innovative gameplay and entertainment value.

Figure 1 - Main Page

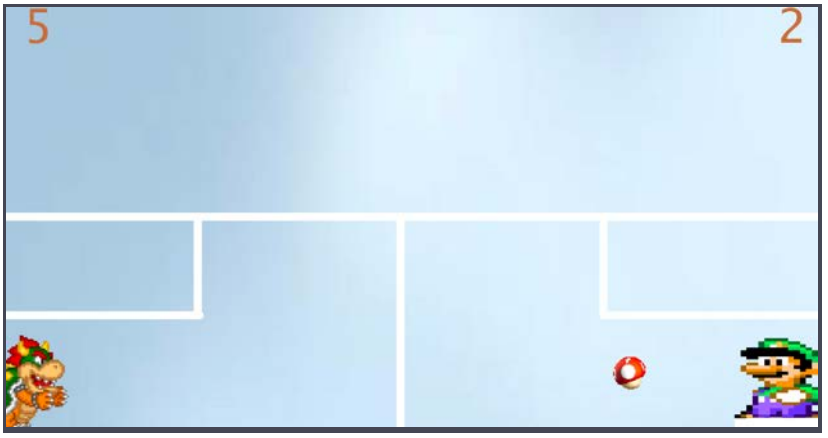


Figure 2 - In-game design

Figure 3 - Win Page

Notice: this project is built and run in processing 3, please open this project in processing 3 in case bugs appear.

Link to this project:
https://drive.google.com/drive/u/0/folders/1edIzhgRxggAUOrXFyRJ4nkJh60NEEy6x

8. Road Crack Detection System for Enhanced Road Maintenance:

This engineering project is dedicated to the development of a computer vision-based road crack detection system, which leverages the YOLO algorithm to advance road maintenance. The primary objective is to cater to the requirements of local councils and authorities responsible for maintaining road infrastructure. By doing so, the system aims to enhance road safety and lower maintenance expenses through early defect detection.

As the project operates within PyCharm and necessitates different virtual environments for code execution, it is shared and accessed as an image.

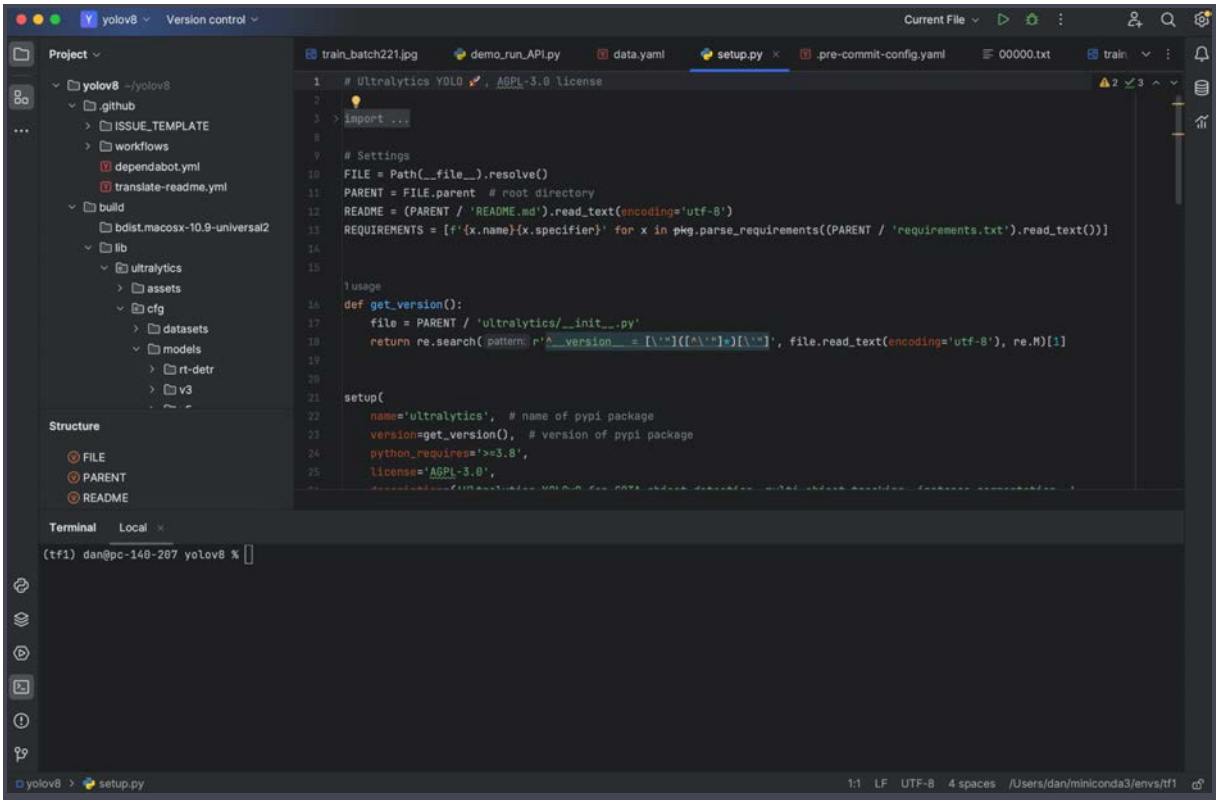


Figure 1 - Basic runtime interface

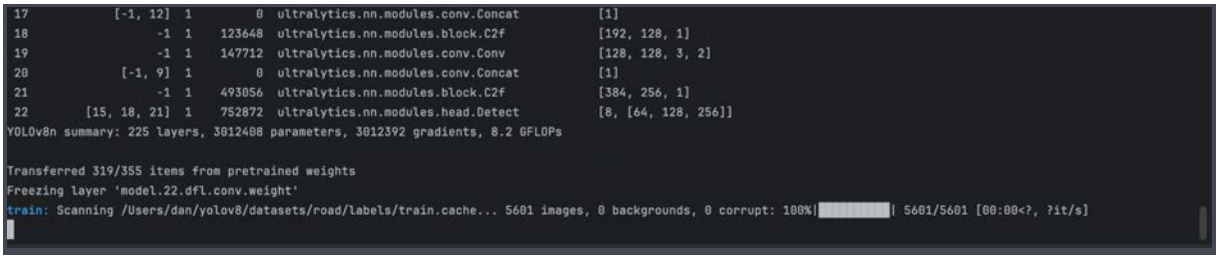


Figure 2 - Code and training

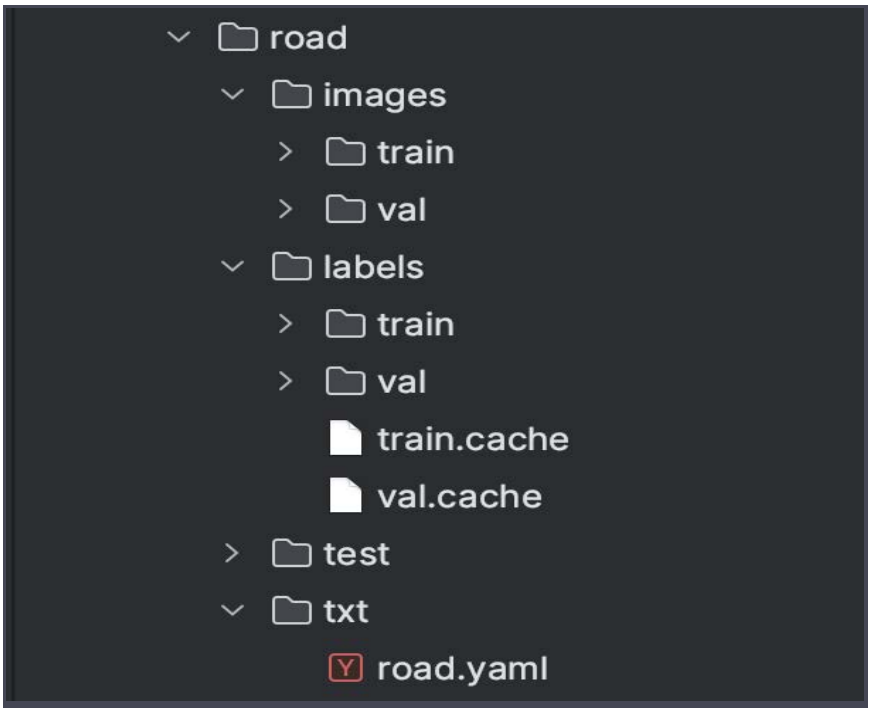


Figure 3 - Database and algorithm

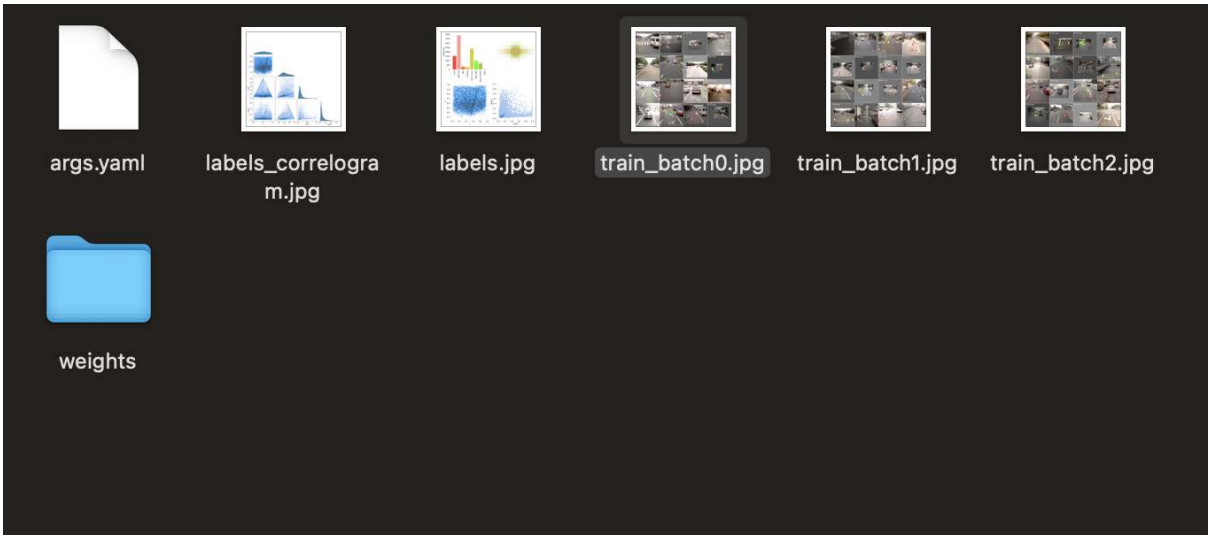


Figure 4 - Training results

Link to some training results in this project:
https://drive.google.com/drive/u/0/folders/103zWayXLLy7a6L7Zhy2iNkUg90VInL9S