Peter Marcelis - Portfolio (tl;dr version)

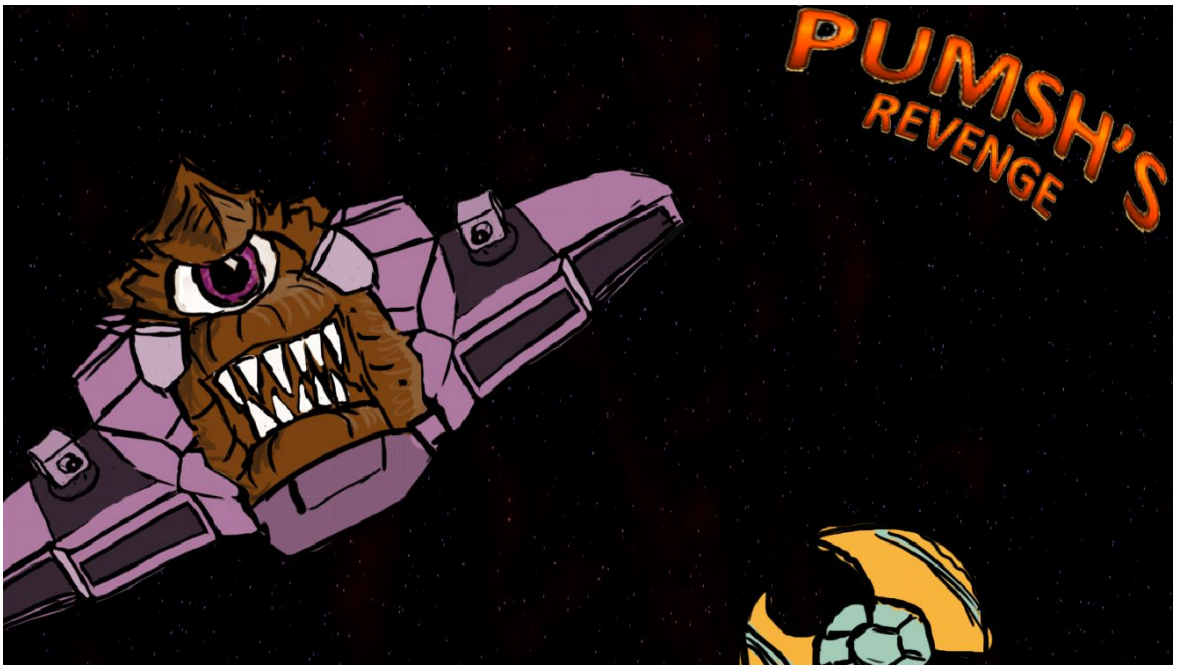
Pumsh's revenge (Processing - Java)

Pumsh's revenge is a game which turns the original shoot em up genre around. Instead of being 1 little ship fighting against waves of enemies to ultimately fight the big boss, you are the big boss.

As the final boss monster you fight against hordes of enemies (heroes) to stop them from destroying you. Pumsh's revenge combines the elements of the shoot em up genre and let's the player be bad guy for once.

Ranked #1 in the entire class, ranked 3rd of the entire year of Game Development.

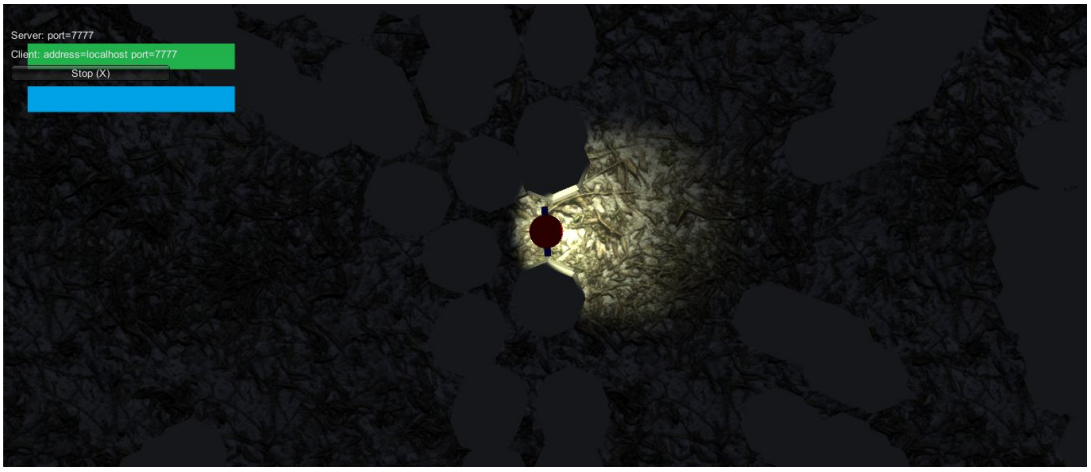
- Gameplay: Programmed the code for turning the arms, shooting, projectiles and power ups.
- Artwork: Setting up layers which the players is made up of (head, arms, armor, spaceship). Creating the player instruction manual art.

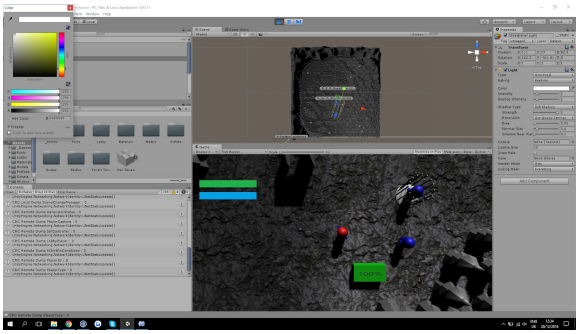


Hide ‘N Horror (Unity - C#)

Hide ‘N Horror was a multiplayer game in which 3 players battled against killer who wanted to trap them in his forest. The players had to work together to turn on a couple of generators which to escape. The killer had to trap each player and made sure the others couldn’t save players.

- Gameplay: Programmed most of the multiplayer functionality, player abilities, controller support and performance optimization.
- Design: Put the forest level together and the lighting.
- Playtesting: put together multiple testing sessions and reviewed the feedback.





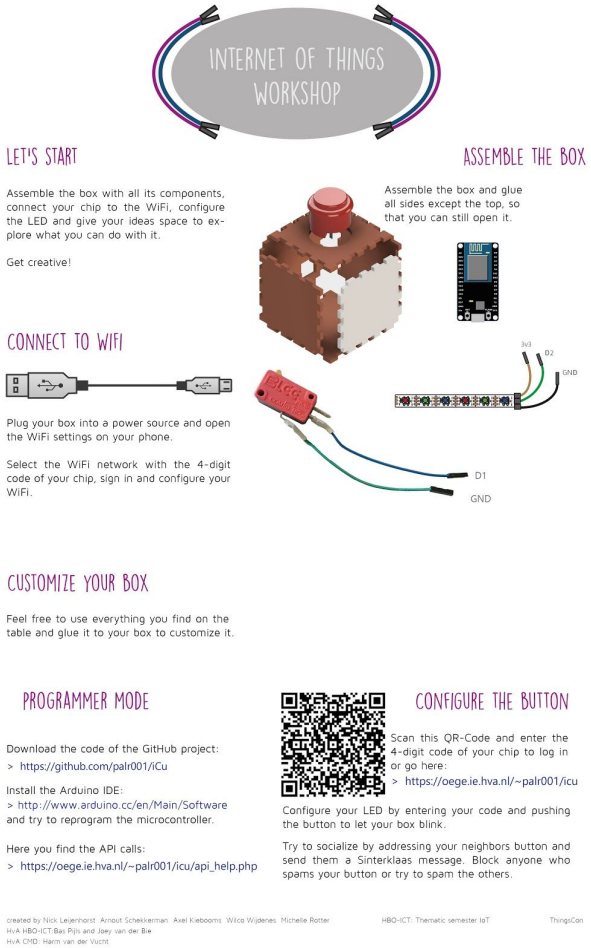
Workshop Internet of Things (Javascript - PHP - Java)

Creating a workshop for CMD students in which they learned how to program IoT devices. with these devices they would gather data and learn how to visualize this data.

The main assignment was for them to build a box, hook it up to a server and create pixel art with the rest of their classmates.

- Iot Devices: Programmed the code for the devices to connect to the web and each other.
- Web development: Programmed the database, api, and visualization of the boxes.
- Point person for the presentations and instructing the students.

Link to the code:
https://drive.google.com/open?id=1fNq5CTG2t10fcL5MMyeNpaQpuHHRZf9mGEWlABAuBSs



Internship at TinQwise Immersive (AR/VR - Unity)

During my time at TinQwise Immersive I learned how to develop apps together with professional freelancers and how to work with customer demands.

Most of the work I did there was done independently and most often I had to create my own solutions based on customer demands. Usually customers came with an idea and gave us (the developers) the freedom to work it out completely.

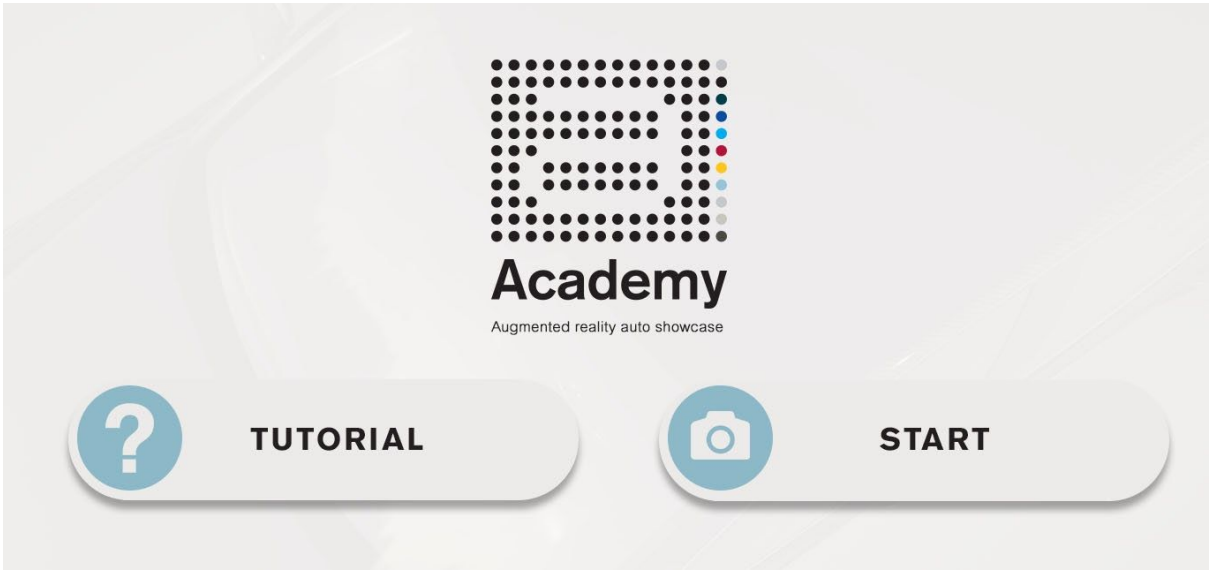
This resulted in a couple of applications, both mobile and pc based, which were either one of two things. The first we would be entertainment in which the app would be used as a sort of gimmick. The second one used to teach people something.

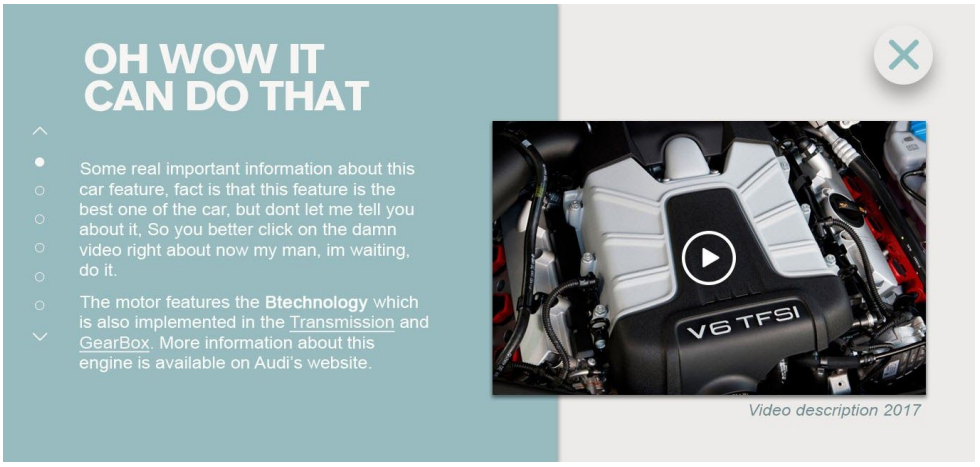
“Optical retailing branch” VR-demo:
Creating a small interactive demo in which the ‘players’ are supposed to help the customer find the right glasses.

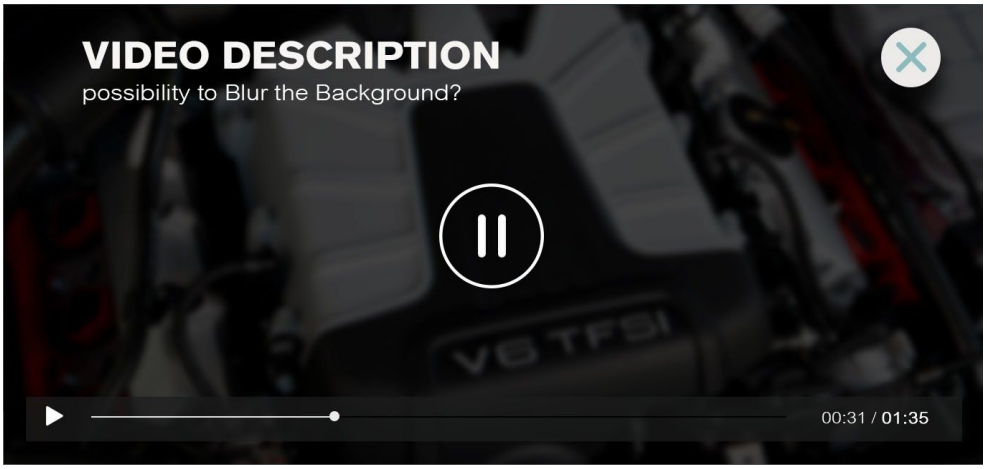
- Interaction: programmed all of the interaction with the customer, created a rating system.
- Animated: Customer walking in, facial animations.
- Design: Room and interior.

“Automotive branch” Academy:
Creating an interactive mobile AR app in which the users can click on selling points of the car. Each selling point (plus sign) has bits of information, images and a video.

- Unique Selling Points: Programmed a JSON reading system which turned all the information into USP objects.
- Performance & Optimization: Fixed stuttering and tracking lag on app.
- Lighting, reflections & textures: Created a realistic look for the car.
- Video: created a custom mobile video player.


Academy
Augmented reality auto showcase
TUTORIAL
START

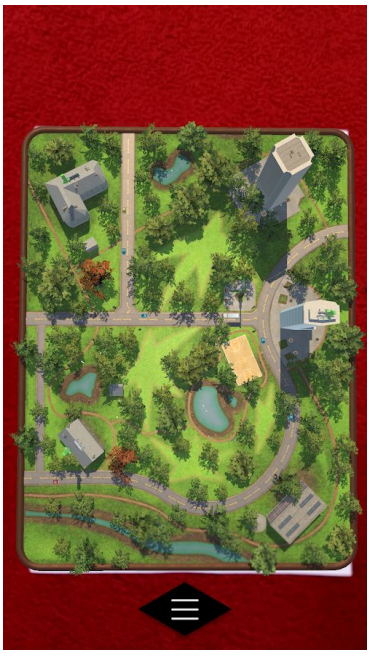

OH WOW IT CAN DO THAT
Some real important information about this car feature, fact is that this feature is the best one of the car, but dont let me tell you about it, So you better click on the damn video right about now my man, im waiting, do it.
The motor features the Btechnology which is also implemented in the Transmission and GearBox. More information about this engine is available on Audi's website.
V6 TFSI
Video description 2017

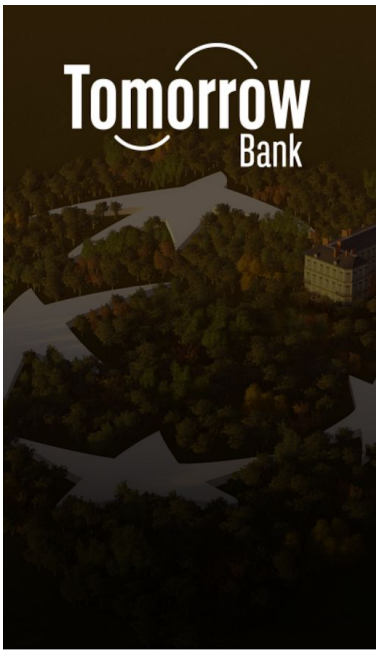

VIDEO DESCRIPTION
possibility to Blur the Background?
00:31 / 01:35

TomorrowBank:
A small living environment with moving cars, working traffic lights and a few buildings. Combined with

The app delivered information about a new website to the users by showing information bites per building about their new e-learning site.

- Information display: programmed the system for loading and showing the data for each clickable building.
- Modeling: made two buildings, the traffic lights and the cars.
- Animation: moving animals in the park.





Digital Ambassador
Surprise gift application for people who had completed a course. The application let people celebrate by showing them which badges they got and loads of fireworks. (Also a lot of pink).

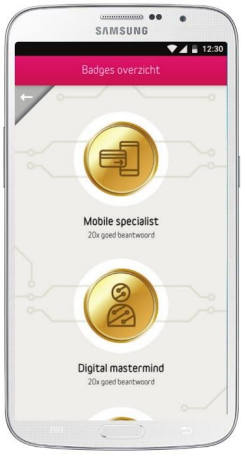
- Localization: Programmed the app so that all the text would change to the the corresponding language depending on which marker was scanned.
- Information display: Programmed the manager for the User Interface.
- Particles: Created a particle effect that showed stars & stripes when the gift box was opened.
- Design: Created early draft versions for the User Interface.

AR - Scan

Badges overzicht

Certificaat
Digital Ambassador

AR - Scan



Badges overzicht

Certificaat
Digital Ambassador

Project Game Technology - Westworld (Irrlicht - C++)

Westworld is a tower defense game with the player participating in first person as a defender.

Westworld was made in the Irrlicht engine (a visual graphics engine) in which students had to create a game from scratch.

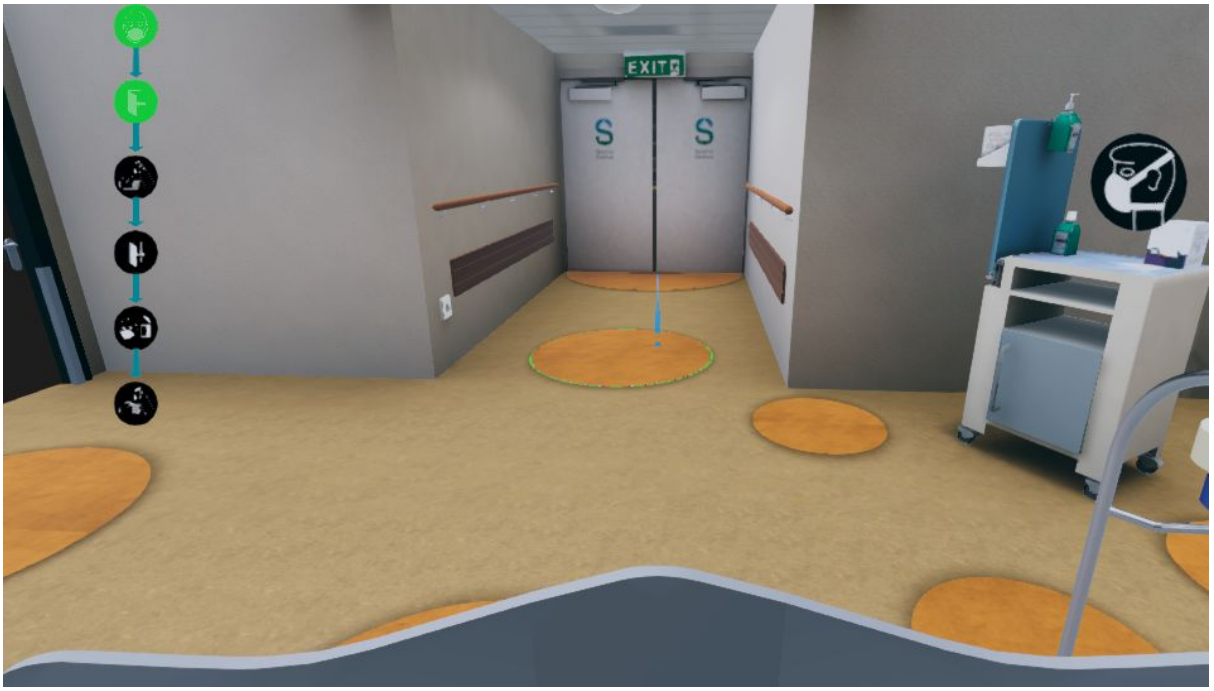
- Programmed: Player (movement, shooting, currency) memory management, Level loading, GameStates.
- Tools: Created a sprite tool which allowed for easy management of images with rescale, placing and transparency functionality.
- Engine: Created a game loop to resemble the Unity engine monobehaviour functionality.

Code:
https://github.com/douiyeb001/WestWorld/tree/develop/WestWorld/WestWorld

Minor Virtual & Augmented Reality (HvA - Unity)

For the minor VR & AR My team and I created a virtual reality training application for hospital staff. The training is about knowing which steps to take when dealing with patients who are confined to isolation. These isolation protocols must be followed in the right order and getting them wrong has serious consequences.

- Design: I made the main procedure room in which you do most of the isolation protocol steps.
- Lighting & Reflection: Recreated the lighting from the hospital inside the procedure level.
- Post Processing: Created the feeling of the hospital by creating Post Processing effects.
- Teleportation & Interaction: Created the teleportation system and most of the interaction with items.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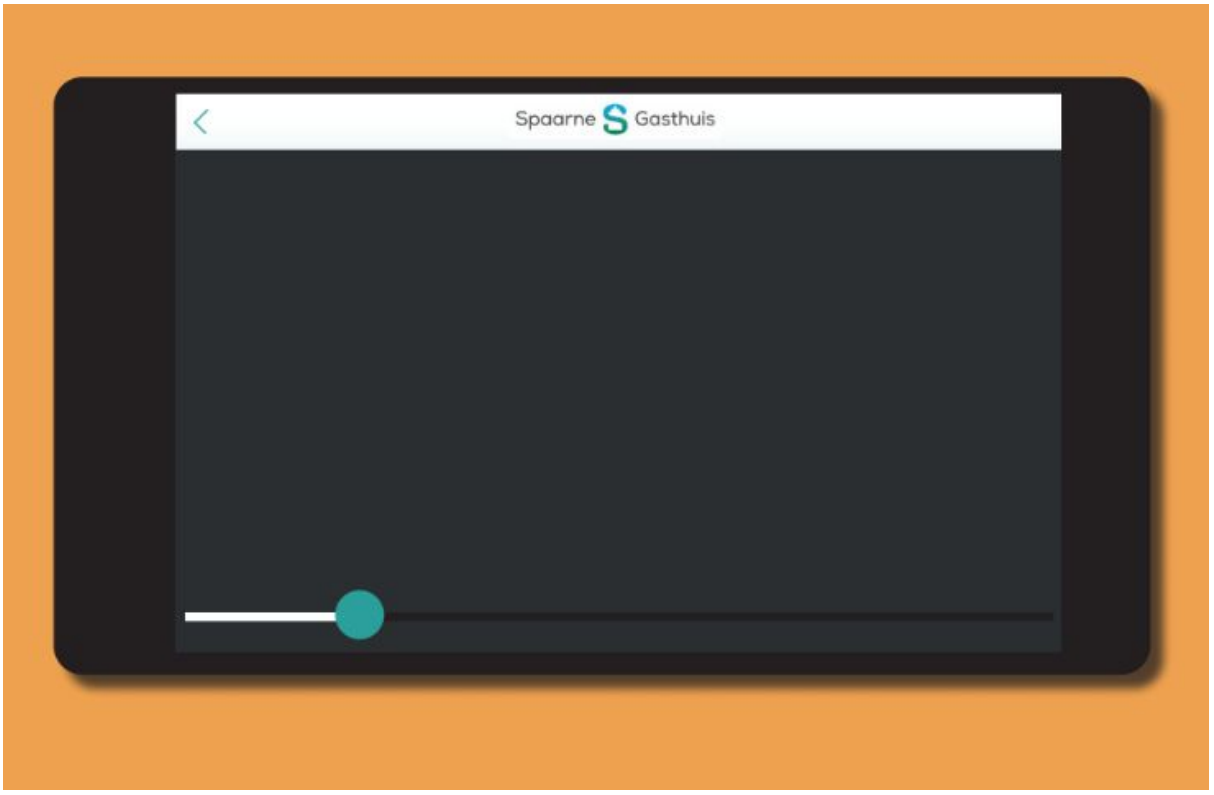
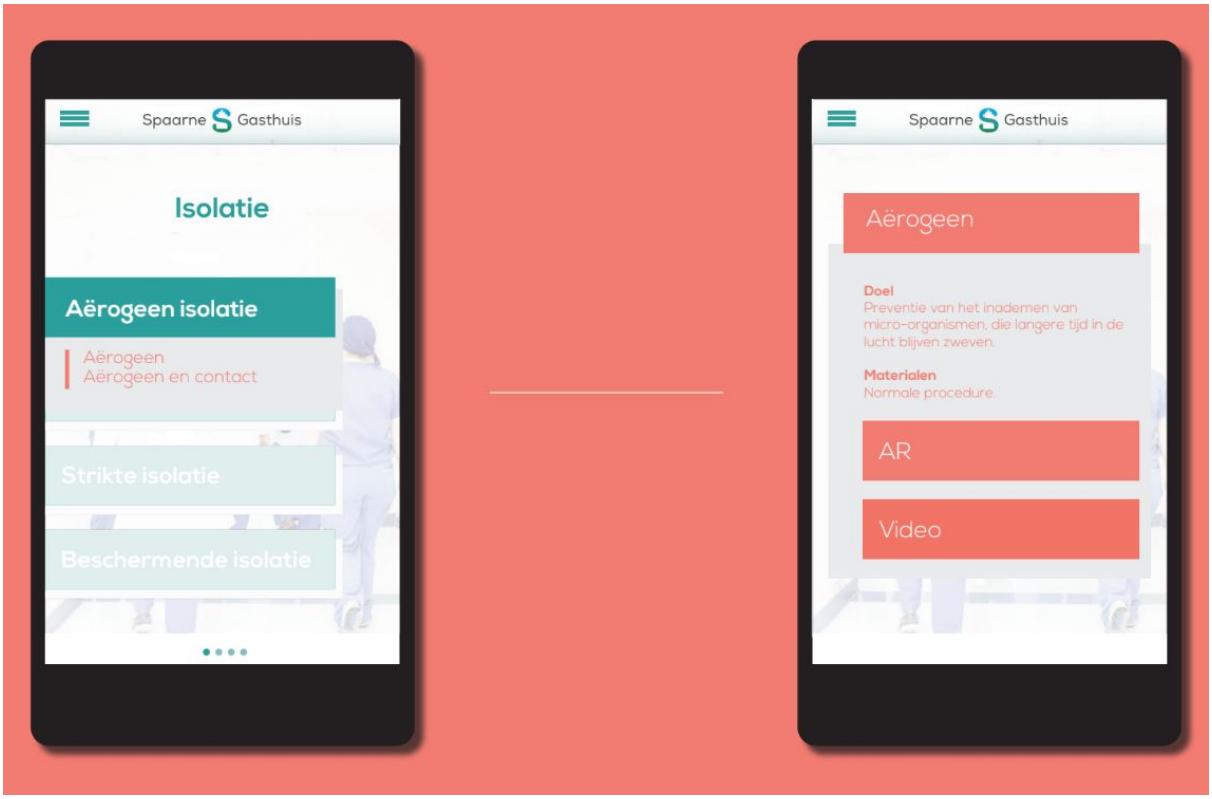

Spaarne S Gasthuis


Spaarne Gasthuis
Isolatie
Aërogeen isolatie
Aërogeen
Aërogeen en contact
Strikte isolatie
Beschermende isolatie
Spaarne Gasthuis
Aërogeen
Doel
Preventie van het inademen van micro-organismen, die langere tijd in de lucht blijven zweven.
Materialen
Normale procedure.
AR
Video

Internship at Spaarne Gasthuis (VR Optimisation - Unity)

During my time at Spaarne Gasthuis I developed and optimised an application I started working on during the minor Virtual & Augmented Reality at the HvA. In half a year I created a framework that could create all possible training scenarios and optimised the application to work on the Oculus Go (android based mobile VR device).

The work I did consisted of:

- Creating a framework for a quest system
- Creating an automated build system for the levels
- 3D-modeling
- Creating textures in Substance
- Optimisation of the application for mobile VR devices (Oculus Go)