



Théo KOKEL

Portfolio

Final year of computer engineering at the
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A person is shown in profile, wearing a Microsoft HoloLens 2 headset and a light blue surgical mask. They are wearing a green long-sleeved shirt with white and blue stripes on the sleeves. Their right hand is extended towards a laptop screen, which displays a virtual environment with a blue floor and white walls. The background shows a window with blinds and a whiteboard.

Assistant engineer internship HoloLens 2 development

UTC-CNRS BMBI laboratory

Sep. 2020 – feb. 2021

HoloLens 2 internship



HoloLens 2 is an amazing device

- Long term functional covid sequelae diagnosis application
- Kinect V2 and HoloLens 2 coupling using local network and Unity. C# Programming. Packages used : MRTK and Kinect SDK 2.0.
- Kinect's body data transferred to animate a 3D skeleton
- Calculations on the patient's ease to move (angles and distances from floor)
- Autonomous work with weekly meetings

THE CRATEST GAME



Personnal project

feb. 2021 – july 2021

THE CRATEST GAME



The four playable characters

- Online multiplayer game : 4 teams of 3 players compete to catch crates
- Made with Unity using the networking package “Mirror” with Epic Games’ Online Services relay. I was the only developer.
- Multiplayer concerns I faced : authority client/server, synchronization, connections, spawns.
- Inspired by UTC’s most famous event of new students’ integration activities
- Tested with a panel of 50 people
- What is a great game where the goal is to collect crates ? The Cratest Game !

Crocomine AI



University project













may 2021 - july 2021



Crocomine



- The game is a minesweeper variant
- Two terrains : water and land
- Three animals (= mines) : crocodiles, sharks and tigers
- Sharks can only be in water, tigers on land and crocodiles can be on both terrains
- Creation of a Python program that plays and resolves maps received by a server
- Expert system using knowledge base and patterns

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1										
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7										

An example of a grid our player had to resolve

APQLYPSE



PERSONNAL PROJECT, JULY 2021



THE VICTORY SCREEN

- GAME MADE IN A FEW HOURS WITH UNITY
- PARODY OF THE RIDICULOUS TOILET PAPER CHAOS DURING LOCKDOWNS AROUND THE WORLD
- “IN AN APOCALYPTIC WORLD INFESTED BY ZOMBIES, TOILET TISSUE HAS BECOME A RARE RESOURCE”
- YOU PLAY AN ELITE SOLDIER IN MISSION TO FIND THE PRECIOUS PAPER
- IN FRENCH, “PQ” IS SLANG FOR TOILET PAPER, BUT UNFORTUNATELY THE PUN IS LOST IN ENGLISH

NOMAD

Board game

University project

sep 2021 - jan 2022

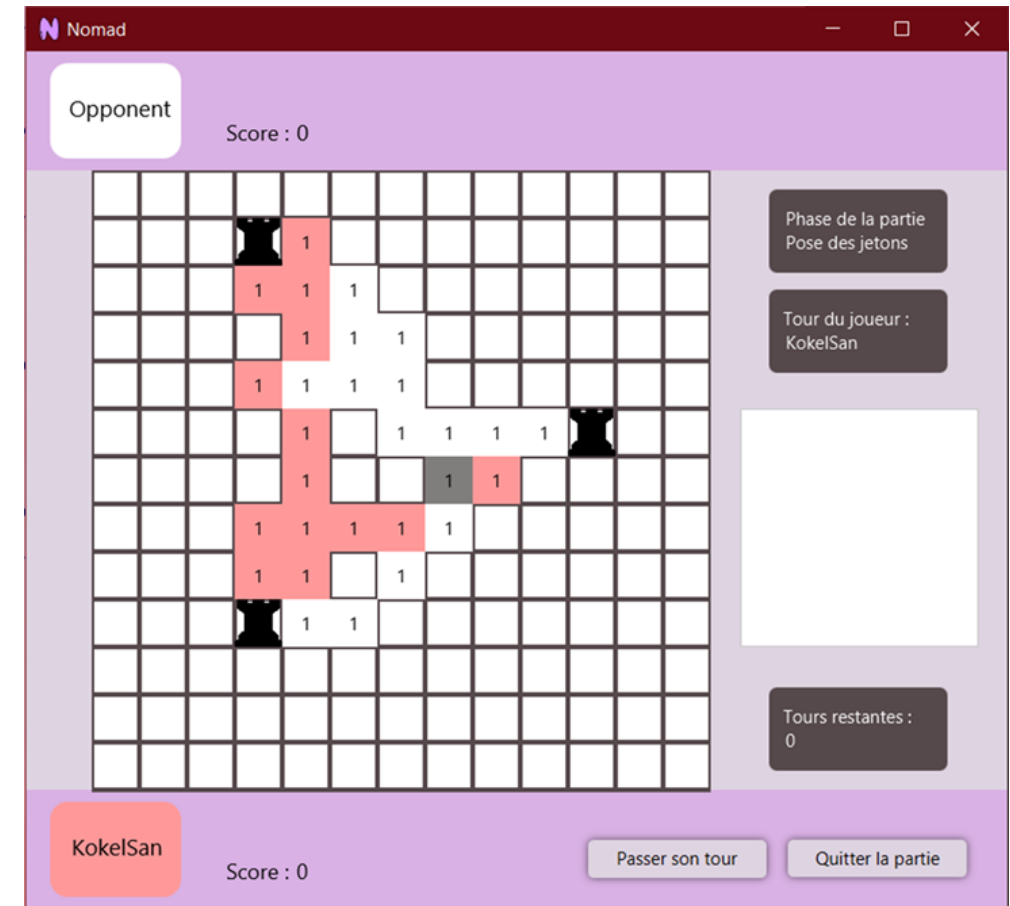




NOMAD



- **24 students divided in 4 teams : data management, networking, main UI and in-game UI**
- **Two players place up to 5 towers on the grid. Then, with pieces, they must connect the more towers they can**
- **My role : in-game UI team's designer**
- **Application of the IT project management course : deadlines, versioning, audits, intra & inter teams meetings, quality etc...**



In-game UI

WasteFair

University project

Sep. 2021 – jan. 2022



WasteFair



The BasketWaste and its different waste forms

- VR local multiplayer game for HTC Vive. Made with Unity using SteamVR and Mirror
- Multiplayer and VR concerns I faced : interactable, throwable, other players appearance and objects synchronization
- Guideline : the game's theme must be environment oriented

- Imagined as a funfair with minigames related to ecology : a hub with multiple interest points and activities
- One minigame implemented : The BasketWaste, a waste sorting game. Three waste colours, three bins, simple goal
- Each waste colour has a rare variant



The MVP point of view



Game photography

Some of my favourite screenshots

Ghost of Tsushima PS4



God of War PS4



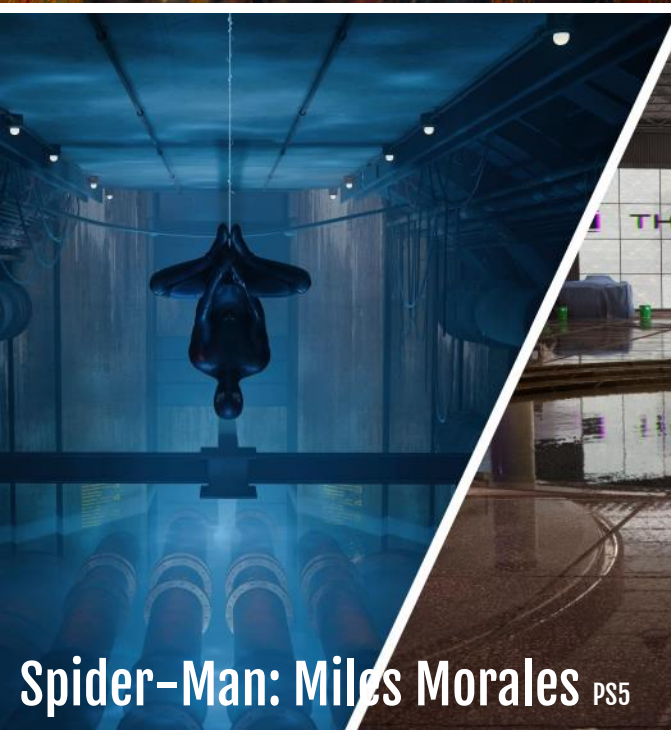
Uncharted 4 PS4



Death Stranding PS4



Read Dead Redemption 2 PS4



Spider-Man: Miles Morales PS5



Horizon Zero Dawn PS4



Horizon Forbidden West

PS5

Thank you

For your time looking at my work

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