PORTFOLIO

KACPER GĄSIOR

My main projects

1 **SPACO** — Arcade game with ads for Android — 3

2 **Alien Defense** — VR shooter game — 6

3 **TowAR Defense** — AR tower defense game — 8

4 **Bedtime Bash** — Hack and slash platformer — 10

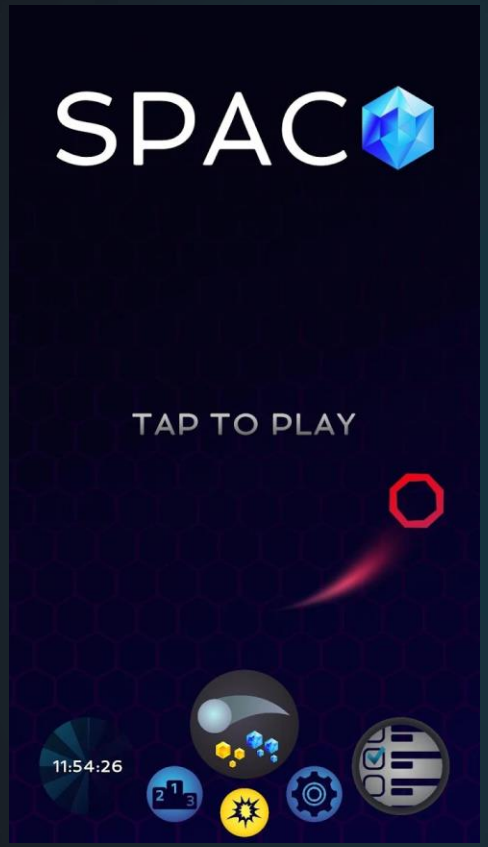
5 **KendaMaster** — Mobile App for Android and iOS — 12

6 **Maze runner** — Desktop game in 3D with AI — 16

7 **Fox Runner** — Endless runner using motion tracking — 20

8 **Smoke Fusion** — Kiosk game for amusement parks — 22

SPACO



Arcade game for Android

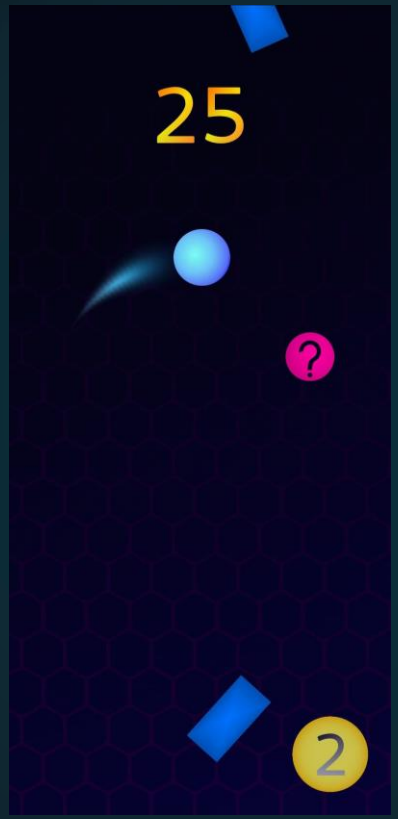
Spaco is one of my first bigger projects. I made it in collaboration with my colleague.

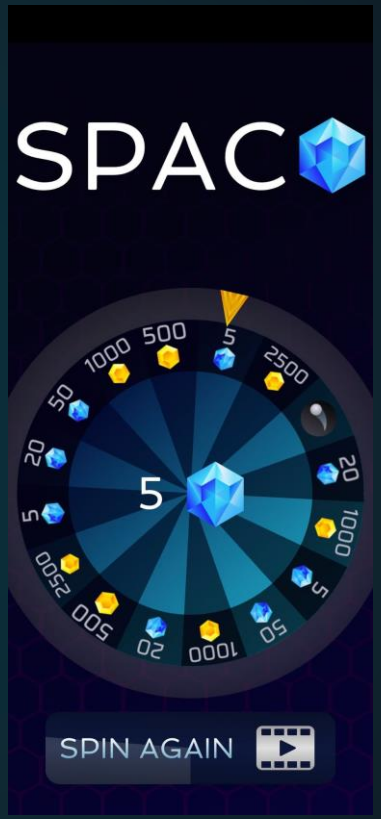
It's an arcade game, with an idea that hasn't been seen in any other games. It was the first time I worked with UI elements and also I used my experience in graphic design to create all of the assets.

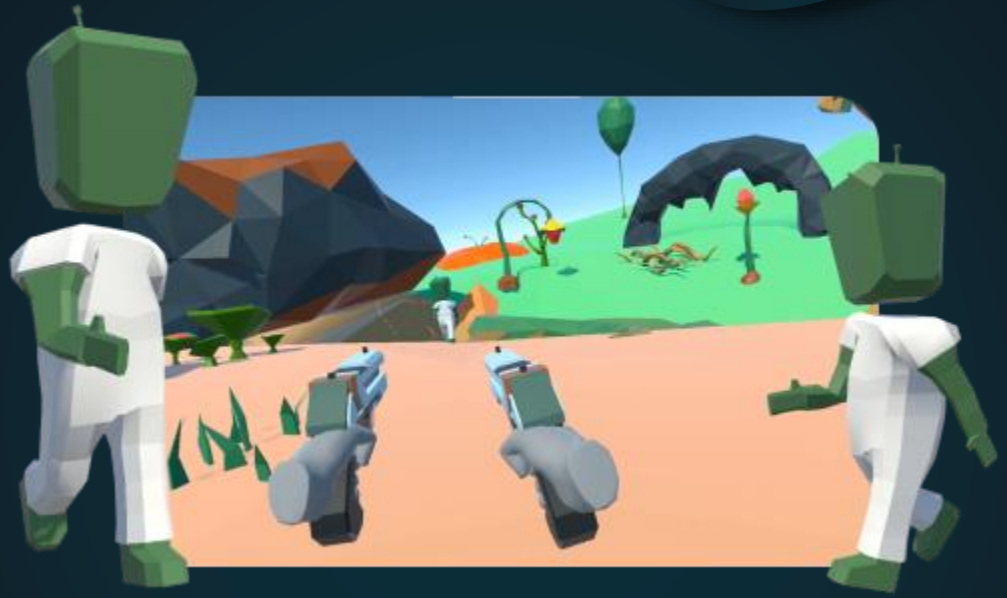
This project taught me more than any other. I went from creating UI, through implementing ads and finished on publishing the game on Google Play here -> SPACO

Some of the features in the game are:

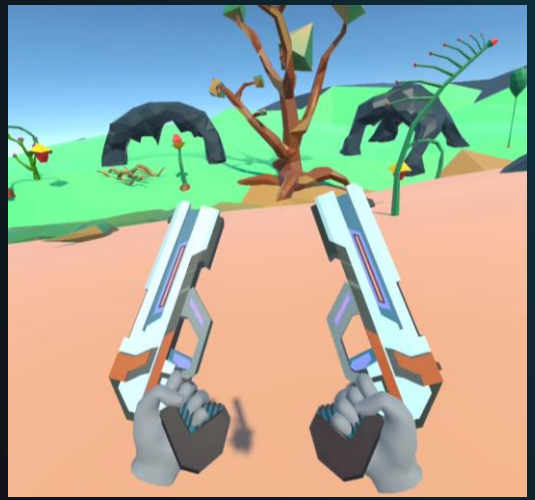
- Daily challenges,
- Implemented ads,
- Google play games leaderboard,
- Firebase notifications,
- Daily roulette,
- In-game currency,
- Shop with different player skins,
- Power-ups







Alien Defense



Alien Defense

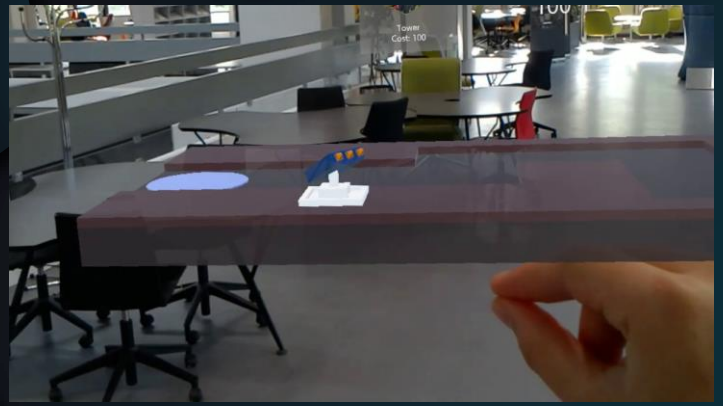
Alien Defense is a simple VR shooter game. The goal of it is to grab the guns from the ground and protect yourself from the incoming aliens.

For better performance, it's been created with URP. Enemies' path is calculated with use of NavMesh components.

The app is in the stage of beta tests on AppLab and has been tested on Oculus 2.

Check it here

TowAR Defense



TowAR Defense

TowAR Defense is a tower defense-inspired game, reimagined in augmented reality (AR) specifically designed for HoloLens. The objective is to protect the base from oncoming waves of spiders by strategically placing defensive towers.

Players have the flexibility to position the game board on any suitable surface, thanks to the implementation of spatial mapping. Additionally, players manually place the defensive towers with their own hands.

In this project, I was responsible for designing and creating 3D models and animations, which were crafted using Blender software.

Bedtime Bash

Bedtime Bash

Bedtime Bash, my second game created during DADIU Academy, allowed me to develop strong management skills, leading 3 other programmers in a team of 18 people. I learned to break down tasks into atomic components, delegate based on teammates' skills and deadlines.

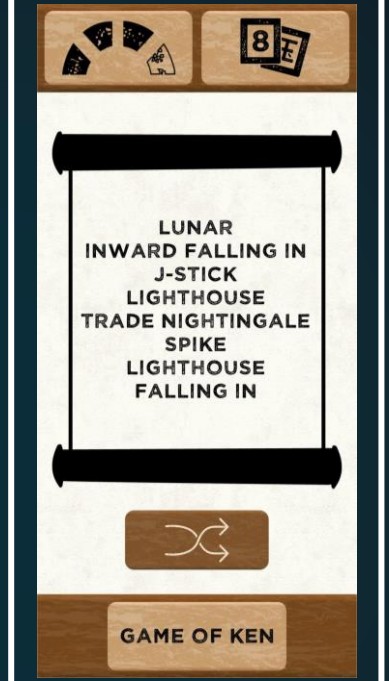
One key challenge we tackled was aligning physical weapon functionality with visual animations. We also applied a state machine pattern to our enemies, utilizing Unity's NavMesh utility for improved AI behavior.

REVOLUTIONARY MOBILE APP FOR KENDAMA PLAYERS

As a Polish Kendama Champion and Game Developer, I felt obligated to create an app that would help kendama players learn new tricks and make their life easier.

Because the app is mainly UI, I've learned a lot about different configurations of many UI elements.

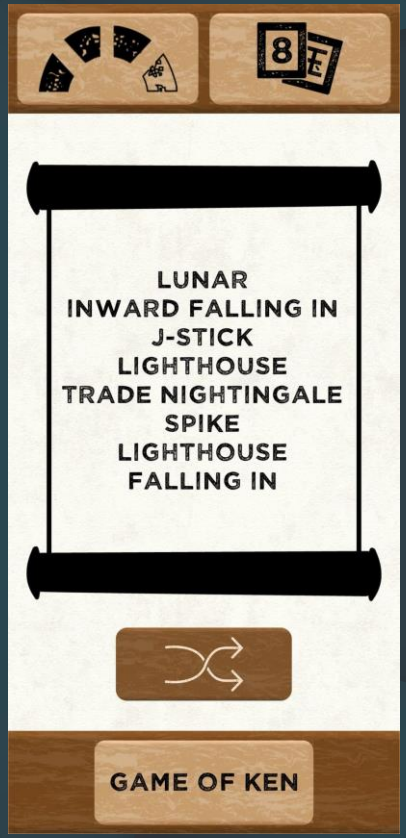
The app has been already tested on Google play and TestFlight and is ready to be published for iOS and Android platforms.



It's the first project that needed to operate on two different platforms. Android and iOS. It was also the first time that I encountered a problem with hiding mobile input over the keyboard, which came out to be a bug of Unity. I'd be happy to elaborate on that during the interview.

The main feature of the app is the combo generator, which generates a valid sequence of random tricks depending on the configuration - number of tricks and skill level.

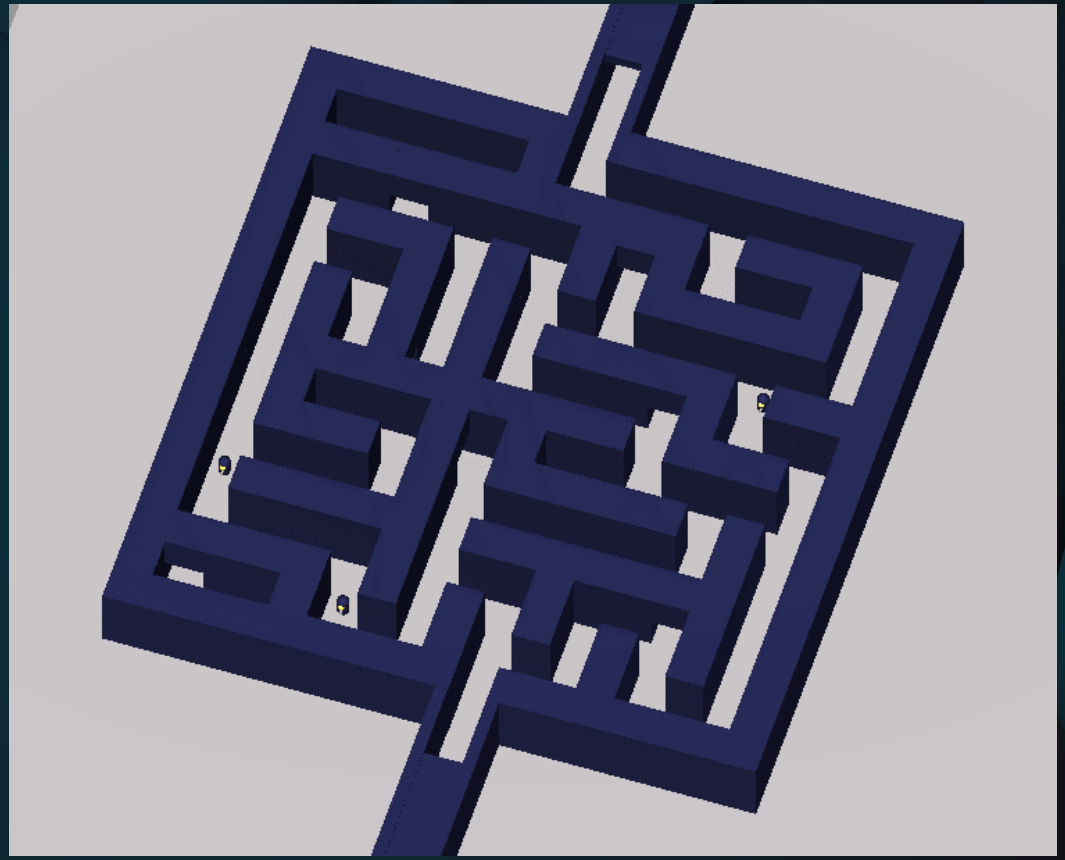
This was a purely algorithmic problem with a connection to kendama world.



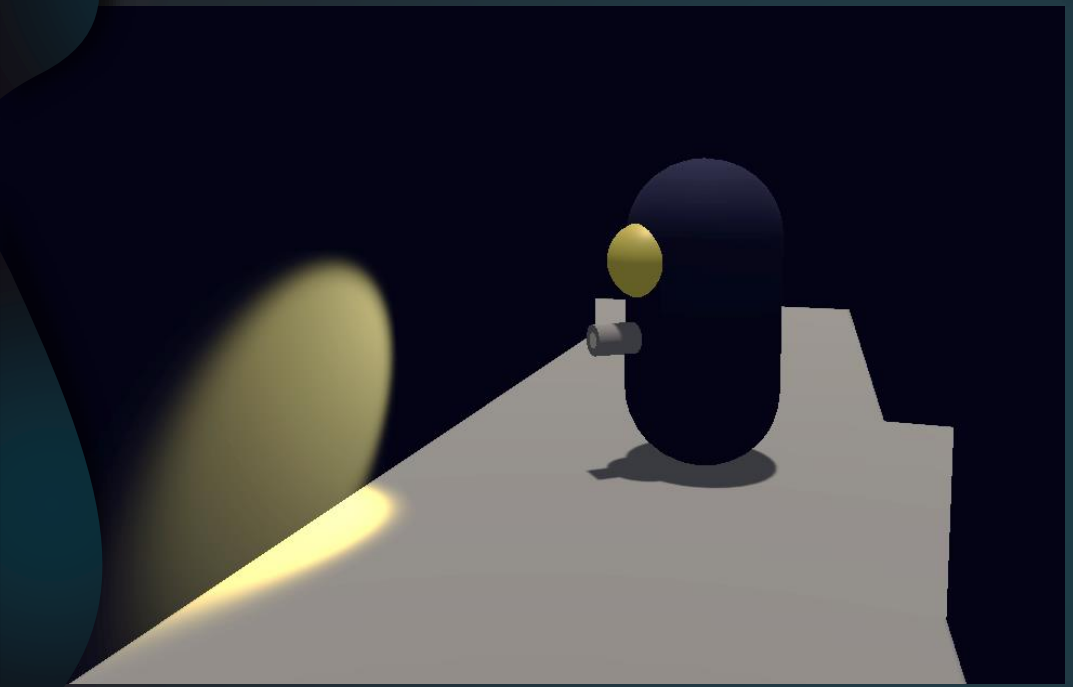
Maze runner

This is one of my first bigger projects in 3D, that I made in a week, during Erasmus in Spain. It includes:

- AI,
- Path finding,
- State machines,
- NavMeshAgents,
- NavMeshObstacles,
- RayCasting.



Policemans



Policeman is a NavMeshAgent which is able to:

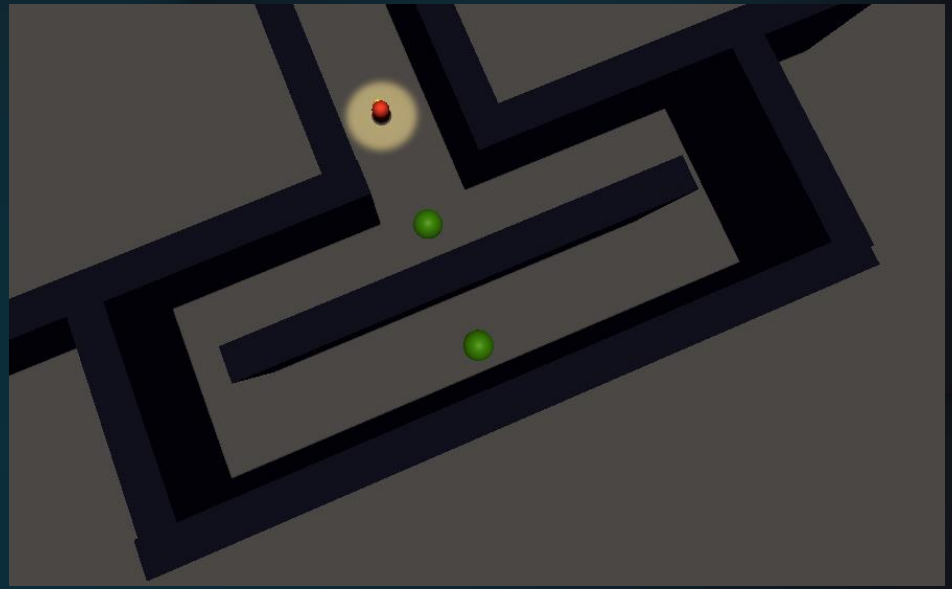
- Patrol,
- Chase and shoot,
- Refill ammo.

The NPC is using RayCast to look for the player. When a Policeman sees the player, it starts the chase and shoots when the player is directly in front of him.

When the player is far away, NPC comes back to patrolling or if he doesn't have full ammo he goes to ammo refill point.

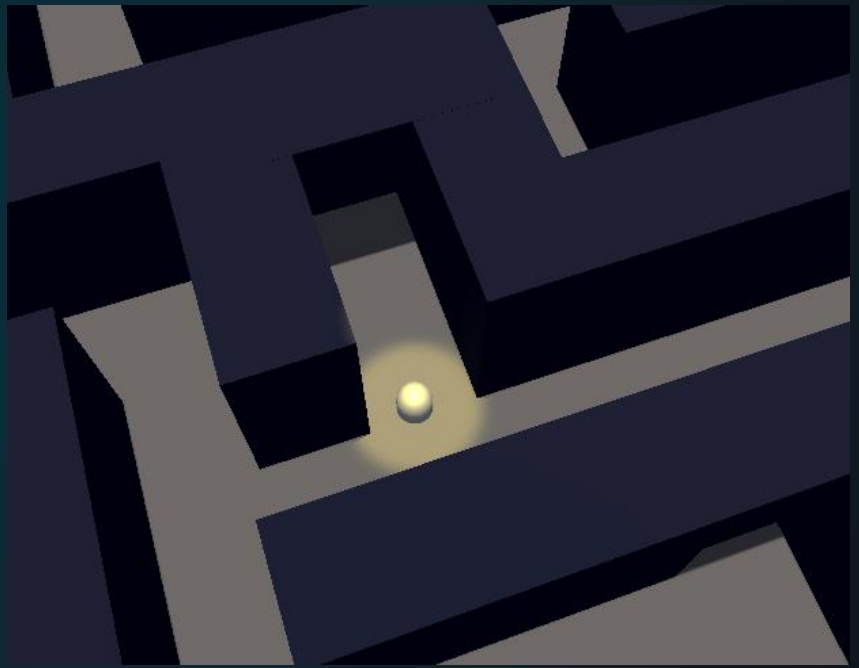
Capturing the baby

At the end of the maze, the player has to capture the baby. When the player enters this section of the maze, he instantly becomes a NavMeshObstacle.
When he approaches the kid with too high velocity, the kid runs away to one of the 2 spots that are marked in the picture with the green dots just for presentation purposes.
The NavMeshObstacle component in the Player makes the baby avoid him during the escape.



Police’s light

Police’s light is a NavMeshAgent travelling from one destination to another. Mesh renderer is enabled only for the presentation purposes.
When light sees the player, it fixes it’s position on him and after 3 seconds of seeing him, triggers the alarm. Then all cops start the chase. When the player is hidden for at least 1 second, the alarm is disabled.



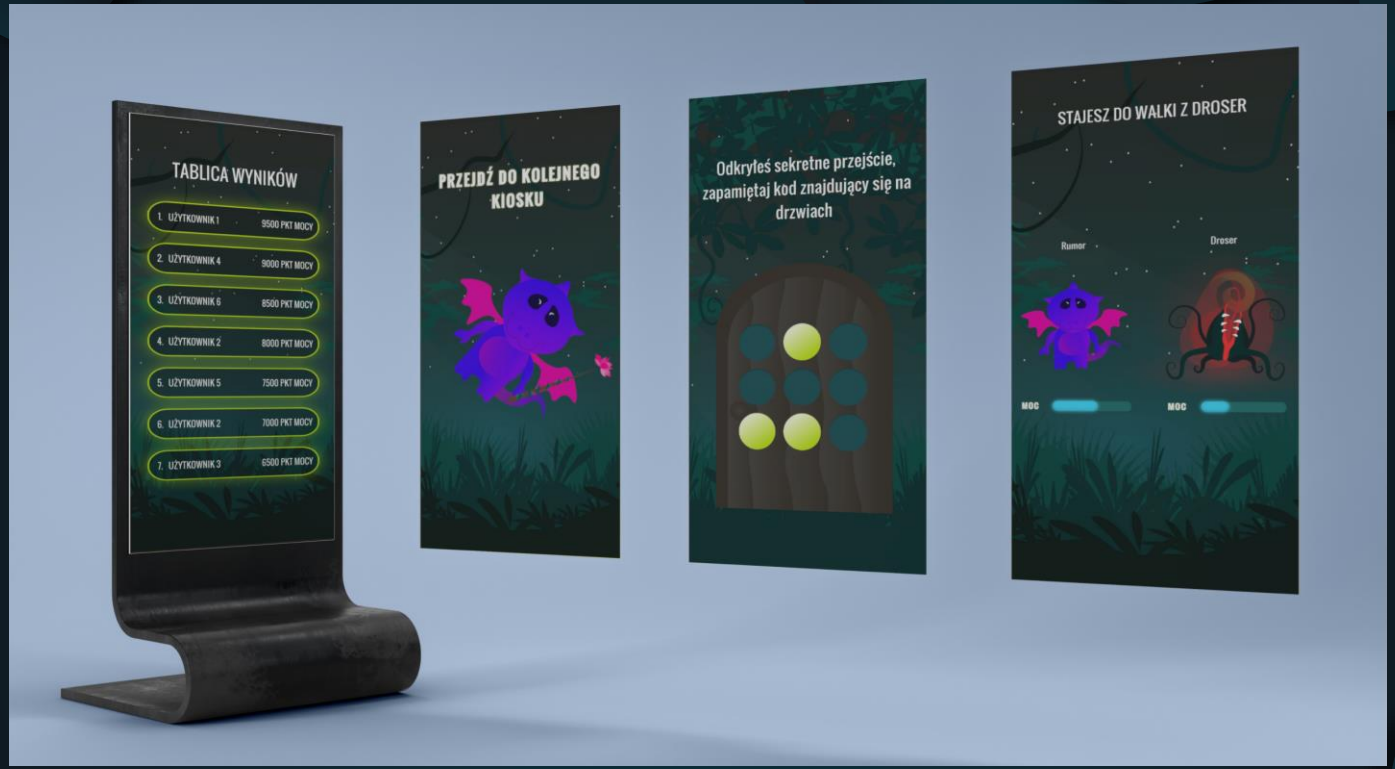
Fox Runner

Fox Runner

Fox runner is a platform game with 3D graphics, where the player's goal is to travel as much distance as possible. During gameplay, the player has to avoid obstacles and collect extra time by jumping over gates.

A game created in Unity3D, designed for playing with help of ZED motion capture camera. Obstacle generation is implemented with object pooling for best performance. Web version of the game simulates players motion with arrow keys.

Check the game here.



Smoke Fusion

Smoke Fusion

Smoke Fusion is a game that takes place on interactive screens distributed throughout the park. It will make your amusement park more enjoyable for children while encouraging them to be more active.

A game created in Unity3D, designed for Kiosks with Android. It uses rfid cards to identify user and track his progress. With use of URP and custom shaders, the glow effect has been achived. In the Internet, there is availble a version designed for testing and simulating experience from the amusement park. Check it here.