# BIRD HUNT-VR

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PROBLEM

The lack of awareness and connection to bird conservation in society, especially among gamers. This is important because birds play a crucial role in ecosystems, such as pollination and pest control, and their populations are declining due to various factors like habitat loss and climate change. Bird Hunt VR aims to raise awareness about bird conservation by providing an immersive and enjoyable gaming experience where players can learn about different bird species and their importance in the natural world.
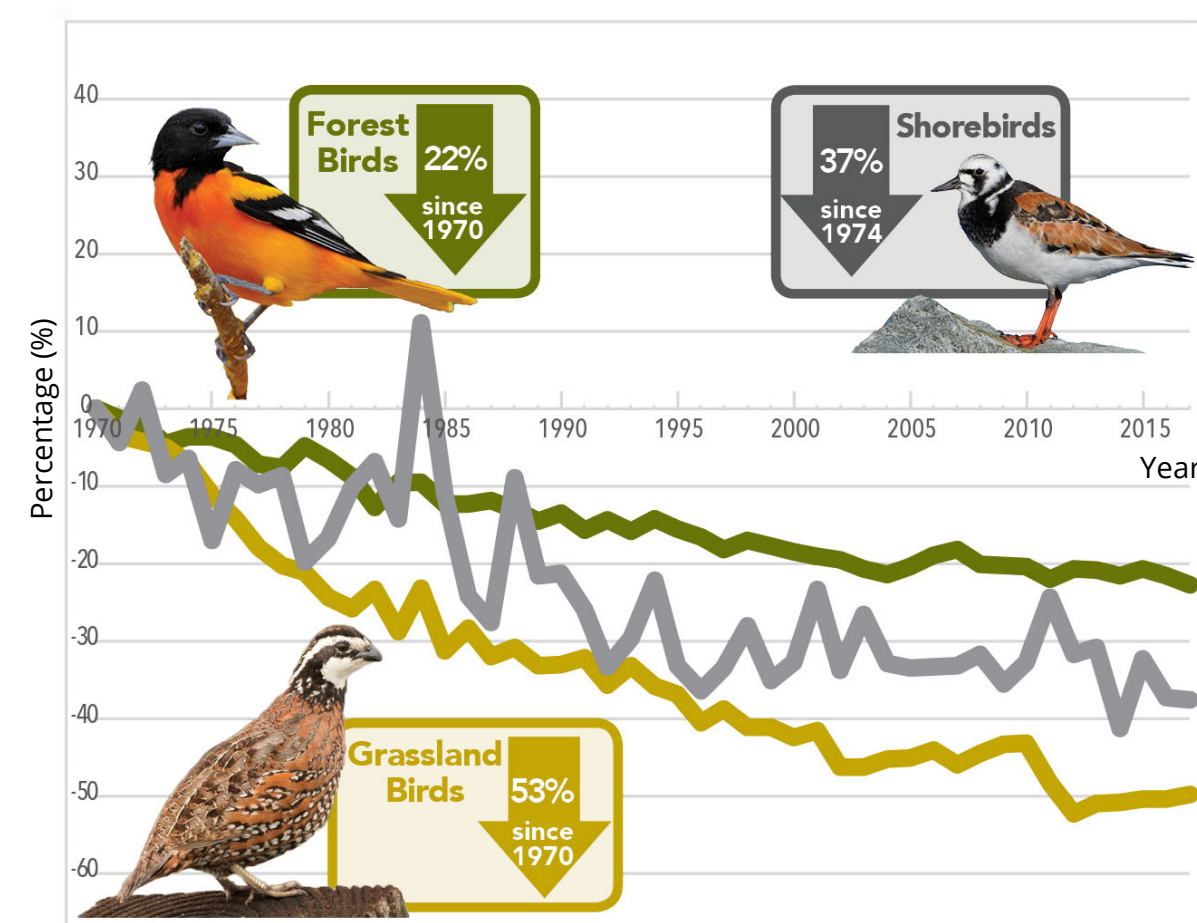
[1] This figure show how different types of birds declines over the year, starting from 1970

MOTIVATION

- Existing VR games often prioritize action and adventure over educational aspects.

- VR games that focus on specific conservation issues, such as bird conservation, remains relatively untapped.

- Traditional approaches to bird conservation awareness, such as documentaries and educational programs, might not effectively engage a wide audience, particularly the younger generation who are more inclined towards interactive and immersive experiences.

- Leveraging the potential of VR technology, this project aims to create a game that not only provides an engaging and thrilling experience but also imparts knowledge about bird species and their importance in the ecosystem.

BIRD HUNT VR QUICK FACTS

> **7** Different types of in-game bird

> **4** AI companion to keep game interactive

> **10+** Different object animations

> **6+** 3D Sound effects to improve ambiance

> **3+** Particle effects to improve immersiveness

SOLUTION

- Used VR environment to promote awareness for bird conservation as well to increase interaction if younger generation

- Created a first-person shooter VR bird-hunting game in attempt to make game retention higher across wide audience

- Offers an engaging and impactful gaming experience that encourages players to appreciate and protect the natural world around them
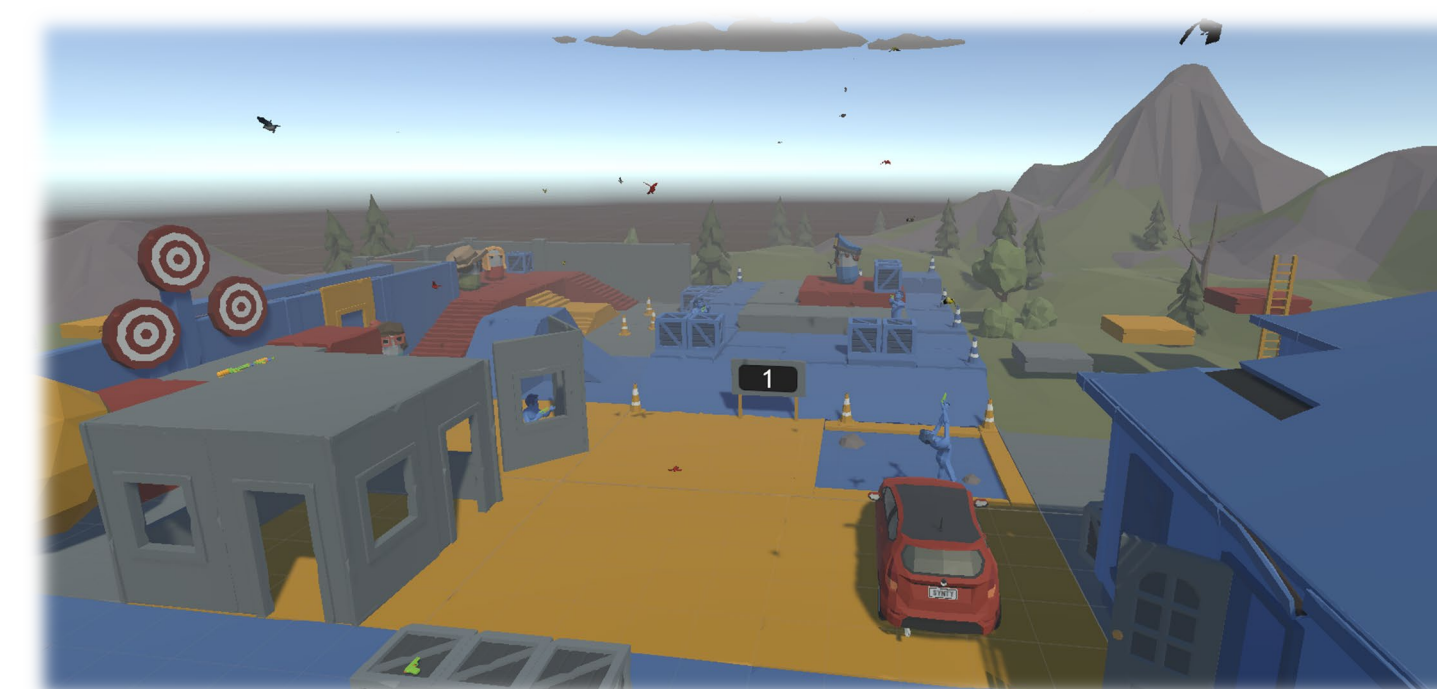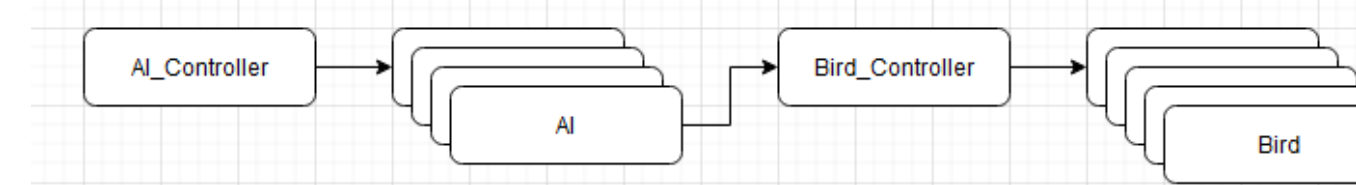

[2] Bird's eye view of the game environment as well as a display of four in-game AI companion
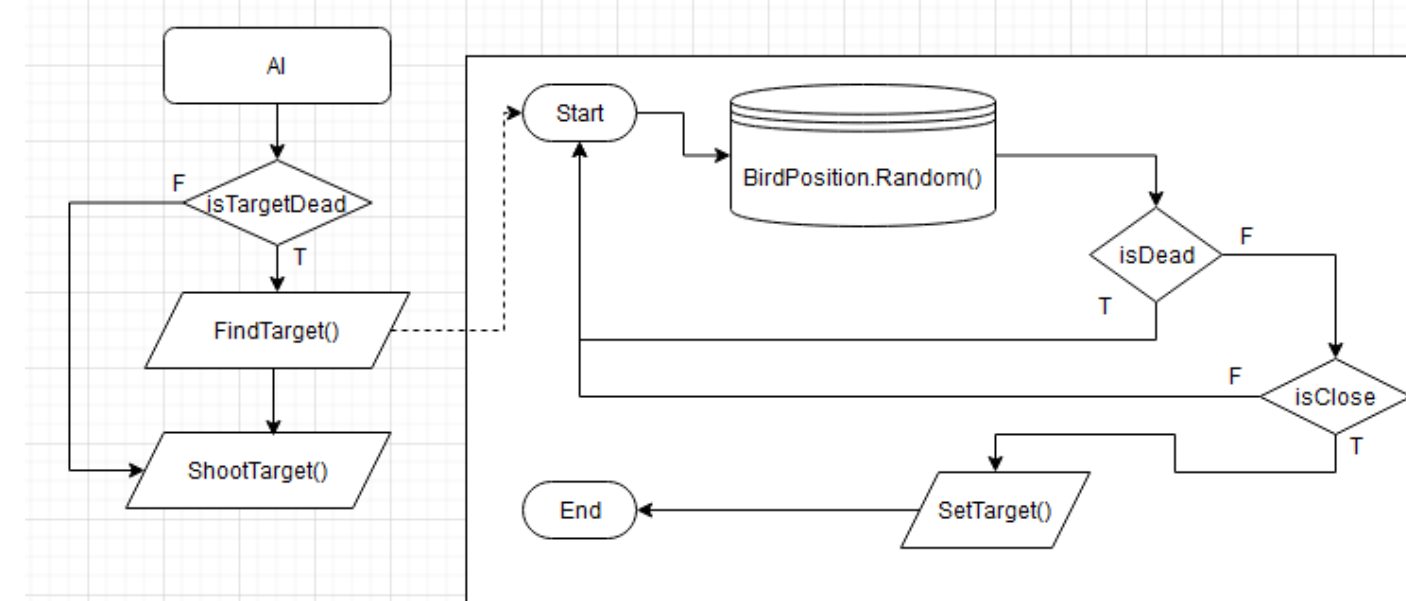

[2] Close-up view of in-game AI companion helping player hunting bird
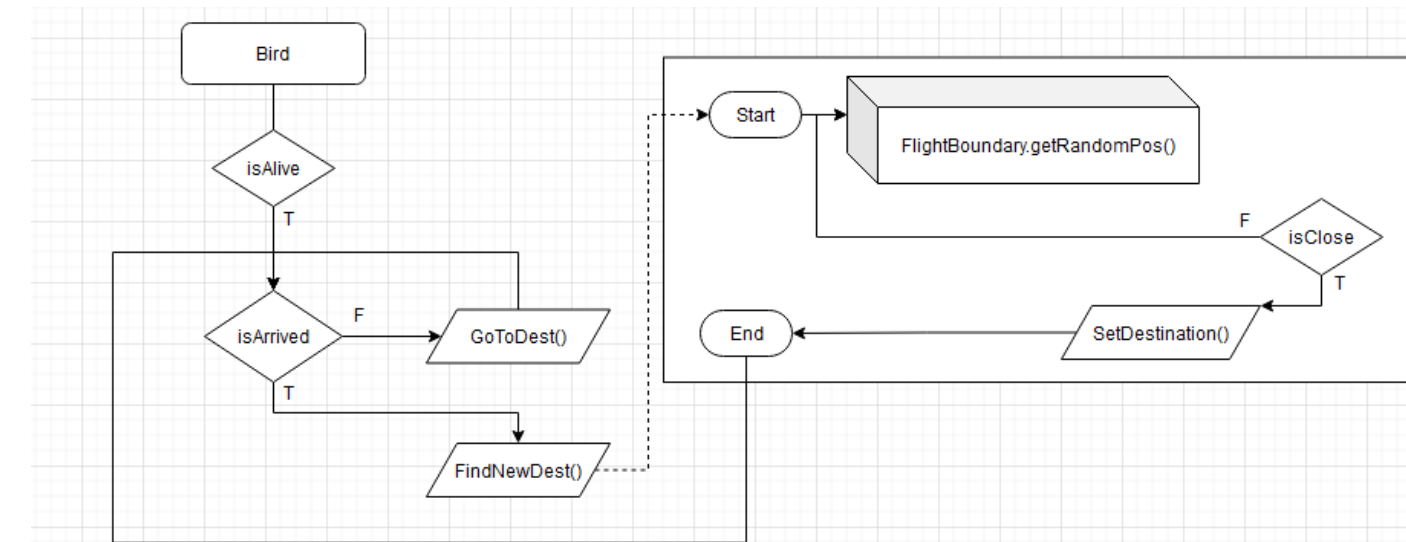
ALGORITHM

[2] Overall structure of Algorithm used in AI behavior

[2] In depth details of one of the AI behavior; which is shooting behavior

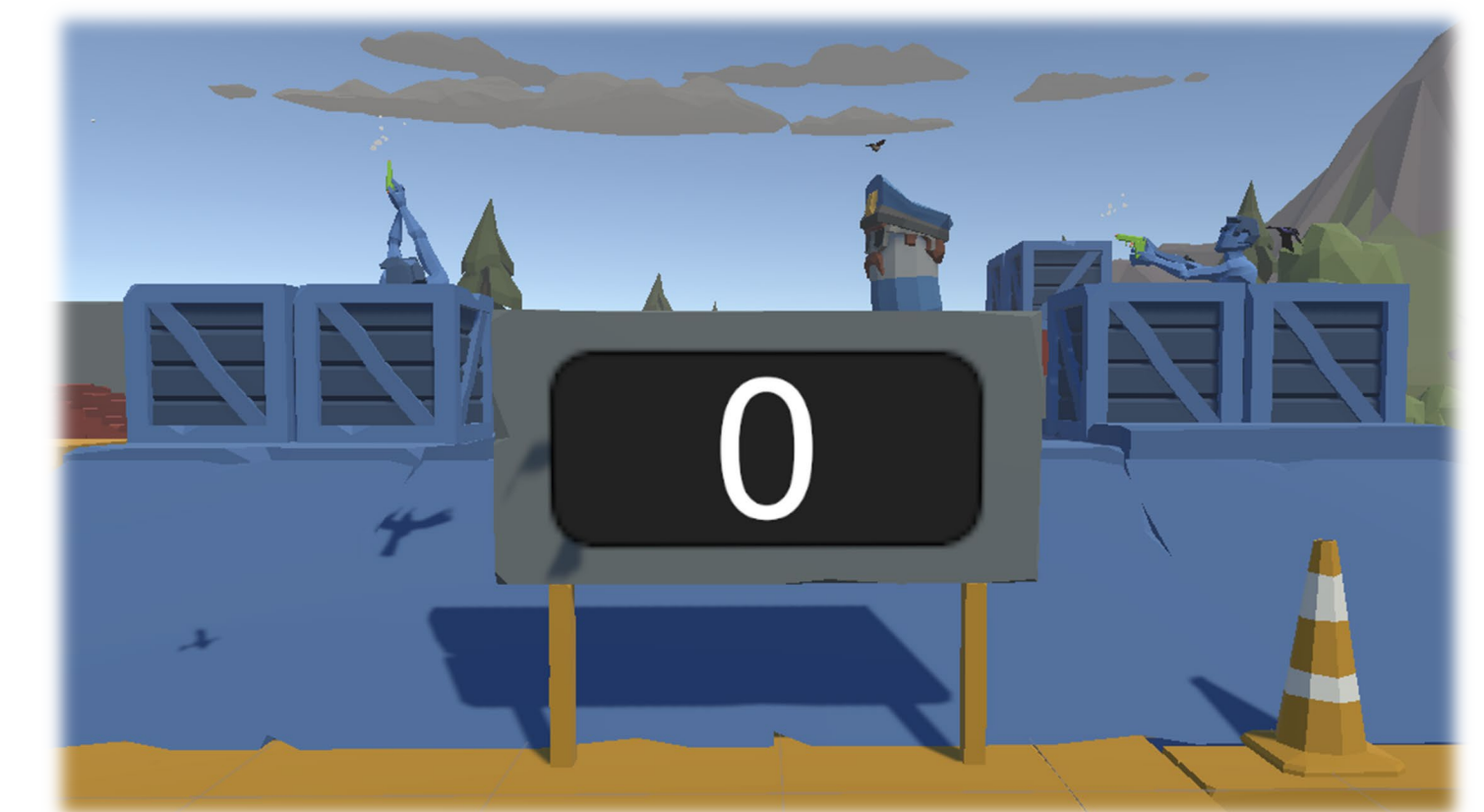[2] In depth details of one of the bird behavior; which is pathing behavior

LIMITATION

- We are not able to emulate a real environment in a short about of time

- Limited gameplay may lead to boring game experiences

- Physical limitations for example room size will limit how far we can move

HARDWARE

- Oculus 2 VR Headset
- Oculus Rift S

RESULTS

[2] Scoreboard that keeps track of the amount of bird killed by the player

[2] Fun feature where AI companions can dance with the player

[2] A small popup panel to let the player know the types of bird that they shot

References

[1] Campbell, V. (n.d.). *Steep declines*. State of the Birds 2019. https://www.stateofthebirds.org/2019/steep-declines/

[2] Hutapea, R., Yeung, H., & Tong, B. (n.d.). *Romerojhh/Bird-Hunt-VR*. GitHub. https://github.com/romerojhh/Bird-Hunt-VR