

# Flocking Simulator

Game Design Document

Christian De La Torre

# Game Overview

Title: Flocking Simulator

Platform: MacOS Standalone

Genre: Flocking AI Simulator

Rating: (10+) ESRB

Target: Casual gamer (aging 12 – 100)

Release Date: March 30, 2019

Publisher: Christian De La Torre

Flocking Simulator is a third person game in which the user can move around the terrain freely and watch flocking behavior. The menu provides the user the ability to adjust values according to what kind of simulation they would want to see. The maps simulate different kinds of flocking behavior, such as Lazy Flight and Follow The Leader.

## Unique Selling Points

- Fun for all ages
- User friendly and easy to follow instructions
- Flocking AI behavior IRL

## Platform Minimum Requirements

- Mac standalone
- OS: Mac OS X 10.8+
- Graphics Card: A potato

## Synopsis

You have decided to explore the flocking behavior to get a better understanding of the way animals group together. By having this curious mind of the animal, you have decided to explore the free world and look at nature at its best. You follow a purple box in the wild being chased by wild blue birds that seek to destroy the purple box. This is nature at its finest.

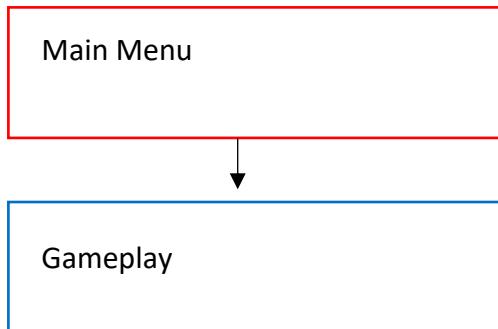
## Game Objectives

The objective of the game is observe AI behavior and adjust the weights of simulation accordingly.

## Game Rules

Freely explore the world and watch the boids follow the purple box target. You can quit the game at any time.

# Game Structure



## Gameplay

Right Arrow/D – Move Right

Left Arrow/A – Move Left

Up Arrow/W – Move Forward

Down Arrow/S – Move Backwards

## Game Camera

The camera will be pointed at the environment at all times and can freely roam around

## Player

### Player Characters

- The Camera

### Player Metrics

- N/A

## Player States

- None

## Player Weapons

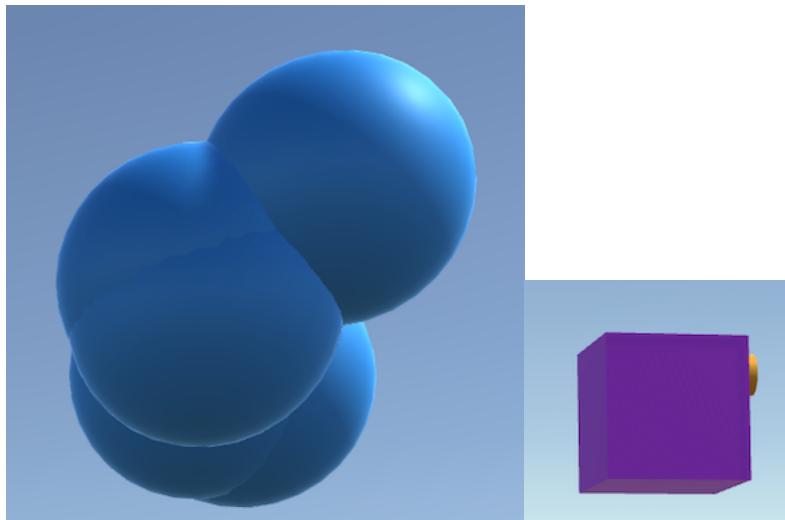
- N/A

# Character Line-up / Enemies

Camera: Main playable character and only character

Target: Purple box that the boids follow

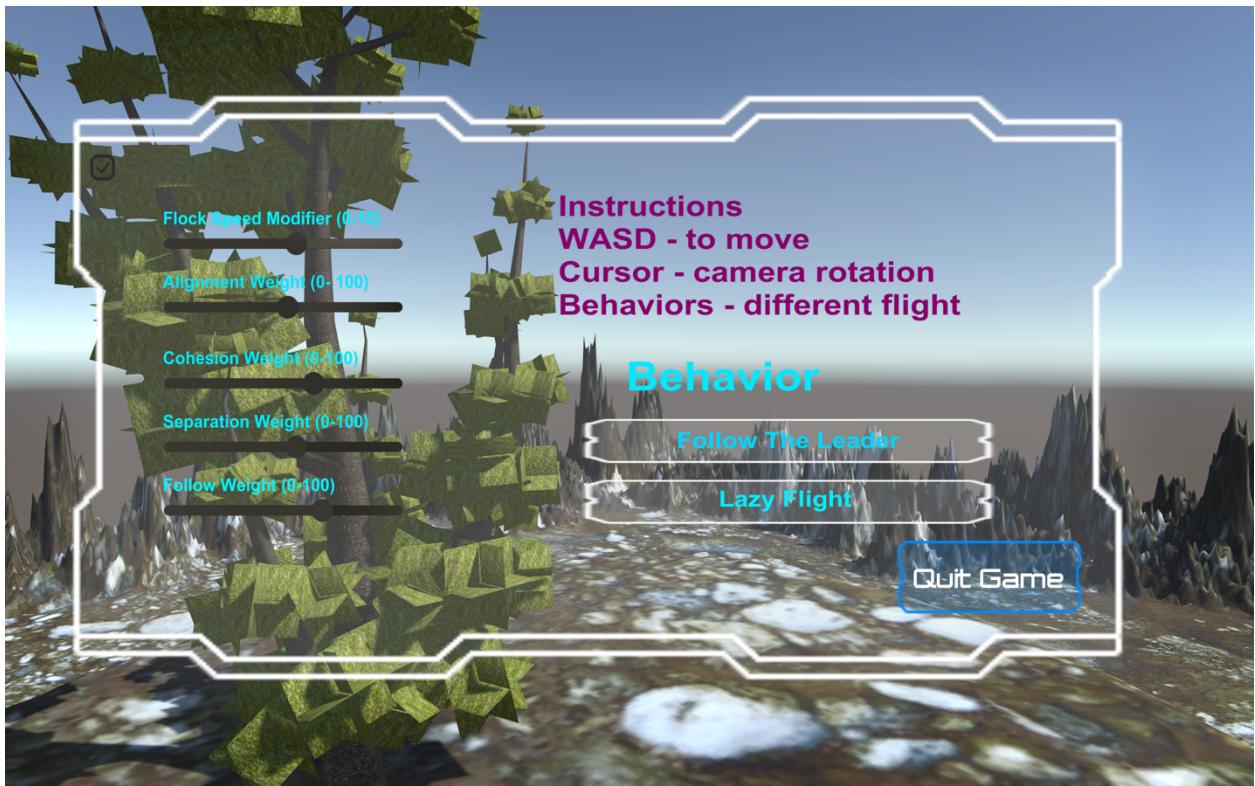
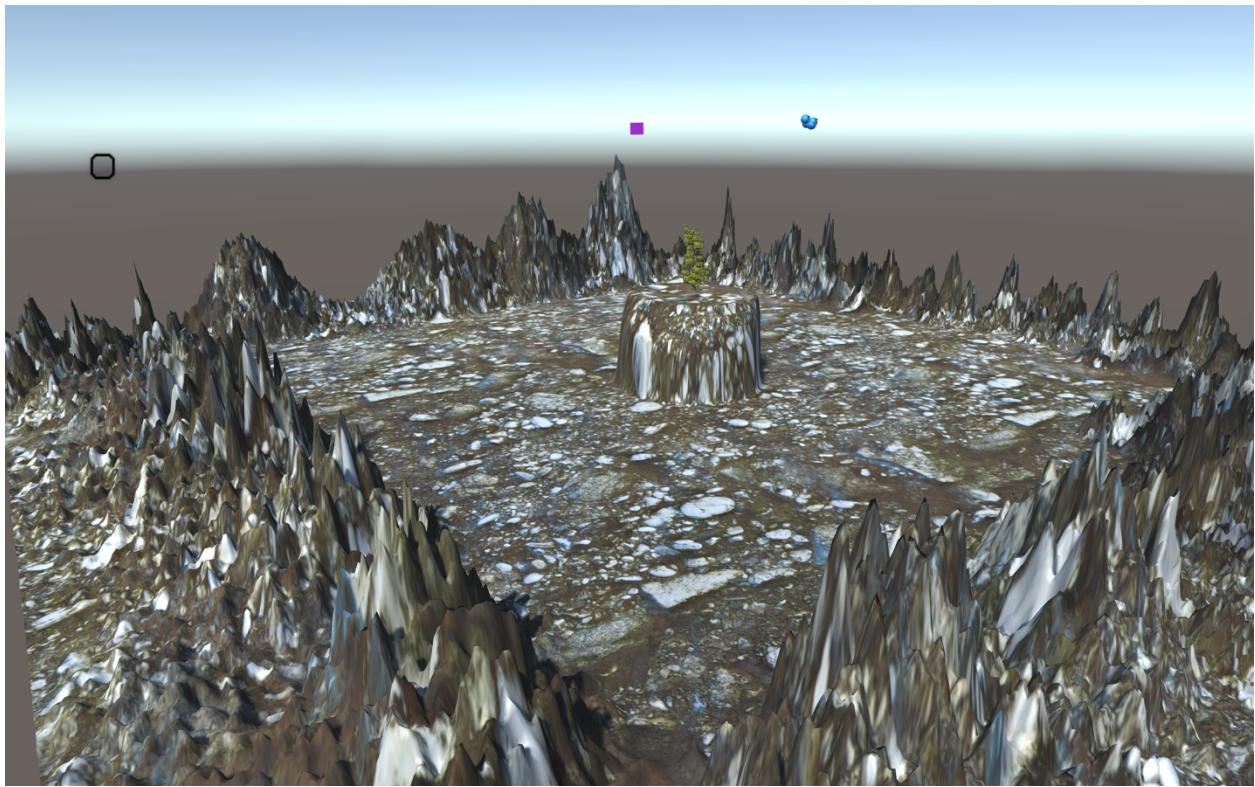
Boids: Flocking animals

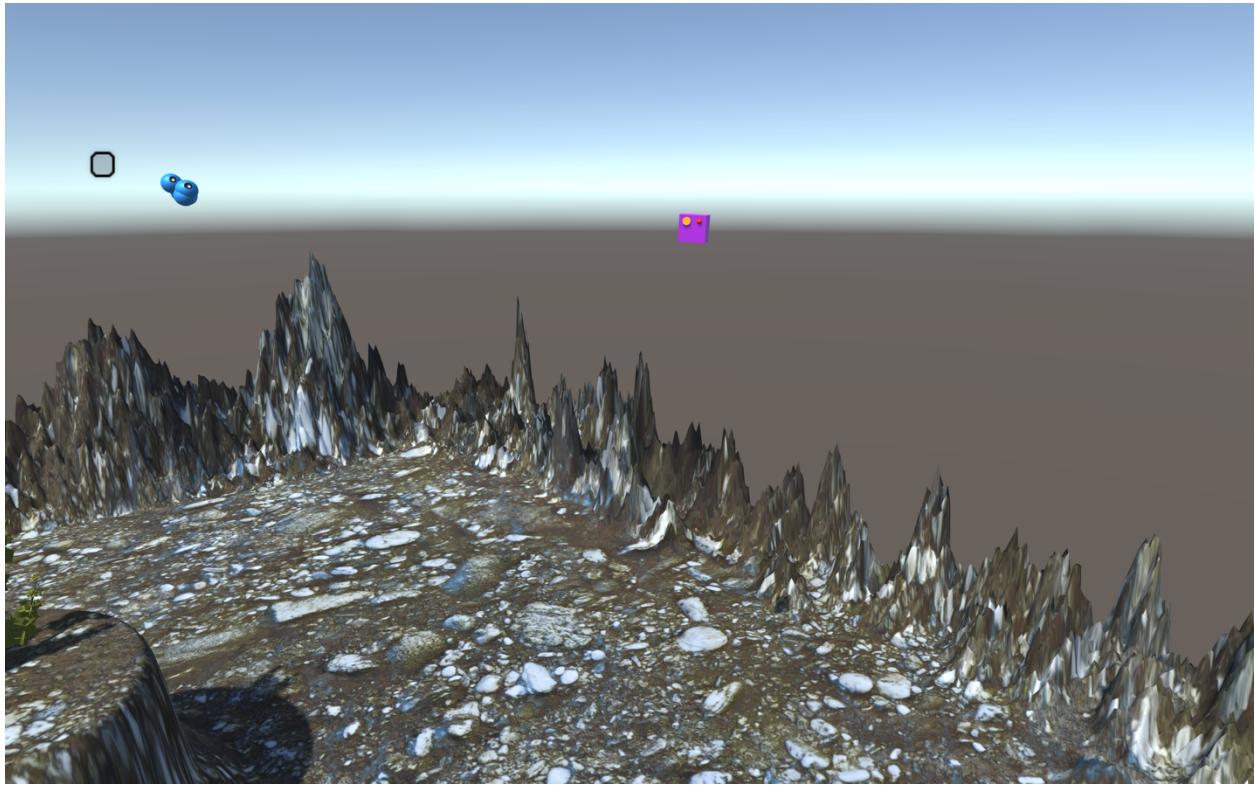


## Art

## Setting

- The game takes place in an open world filled with mountains, dirt, animals, a camera, a target, and a tree





## Level Design

The game consists of one map that has multiple mountains and one camera and one tree.

## Audio

Name	Category	Description
None	None	None

## MVP (Minimum Viable Product)

- One Player character which is the Camera
- Built for the Mac OS Platform

# Wishlist

## ADD ENEMIES

Be able to add enemies to the game in order to increase the difficulty of the game with each different behaviors

## ADD MORE SOUND EFFECTS

Add different sounds for different effects such as death, enemies, footsteps, coin picking, and so on.

## ADD MORE LEVELS

Create more levels and depending on the characters level of skill build a map according to the players skill level.

# Bibliography

Asset Store:

Unity Samples: UI

Yughues Free Ground Materials

Bibliography:

Barrera, Ray, et al. Unity 2017 Game AI Programming - Third Edition. 3rd ed., Packt Publishing, 2018.

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[https://www.youtube.com/watch?v=4q-mw0QlHn4&list=PLTgRMOcmRb3OUOLT2YHARCqtY4FSoyNac&index=4&utm\\_source=YouTube&utm\\_medium=Chapter+5&utm\\_campaign=YouTube+-+Code+Testing&utm\\_term=Chapter+5+Tech+Requirements+section&utm\\_content=Chapter+5+%7C+Playlist](https://www.youtube.com/watch?v=4q-mw0QlHn4&list=PLTgRMOcmRb3OUOLT2YHARCqtY4FSoyNac&index=4&utm_source=YouTube&utm_medium=Chapter+5&utm_campaign=YouTube+-+Code+Testing&utm_term=Chapter+5+Tech+Requirements+section&utm_content=Chapter+5+%7C+Playlist)