

UNITY WORLD

DOCUMENTATION

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IGME.202.01

DESCRIPTION

Simulation of an open world tropical environment with some fantasy elements. In the center of the scene lies a small pond surrounded by palm trees and wild grass. Here you can find wild horses, fantasy-inspired rhinos, and prehistoric Allosaurus's running rampant across the scene.

WORLD EXPLORATION

The user can explore and interact with the world by cycling through cameras using the [spacebar]. There are 3 cameras in total. The first gives a nice perspective view of the center of the scene. The second camera gives an overhead view of the entire scene. The last camera follows the path-following animals as they travel. The user can also click on the terrain to give the herd of rhinos a target/destination to seek. Pressing the [r] key will reset the entire scene.

STEERING BEHAVIORS

- The rhinos (flock followers) in the scene flock and align to a velocity determined by the flock center. When the user presses down and holds down on a point over the terrain, the rhinos will be directed to a new flock center.
- The horses (path followers) will follow a set path by seeking "path nodes" which are essentially check points in the general path.
- Based on the Allosaurus's (flow field follower) position, it will reference a specific slope value in a 2D array of slope values and create a velocity vector that it will align to.
- The Resistance Area is the small pond in the center of the scene. However, the lake only affects the horses (path followers).

RESOURCES

I used resources provided in the myCourses folders. My algorithms are close to those shown both in class and the resources provided online. The main exception would be how I handled coding the Area of Resistance.

IMPORTED RESOURCES

Allosaurus 1.4, Tibor Szijarto; Animated Horse 1.0, Dootsy Development; Fantasy Rhino 1.0, Makism Burgimov; Standard Assets, Unity