

## Milestone 2

### Assignment Contribution: NPC Pathfinding and Navigation Mesh Implementation

1. Developed a new level to thoroughly test NPC behavior.
2. Designed and implemented the Navigation Mesh with the following features:
  - o **Collision-Free Shortest Path Calculation:** Before moving an NPC, the shortest path without collisions is determined. Intermediate waypoints are evenly spaced along this path. If a collision is detected at any waypoint, the pathfinding algorithm adjusts, moving in the intended direction until a clear route to the destination is found. This ensures optimal collision-free navigation.
  - o **Dynamic Path Recalculation:** The path is recalculated in real-time whenever the camera position changes, ensuring continuous adaptability.