

# Traffic Modeling with Unity 3D

Isaiah Martinez  
CSUN  
Mathematics Department  
isaiah.martinez.891@my.csun.edu

02/3/2021

## Contents

<b>1</b>	<b>Change History</b>	<b>2</b>
<b>2</b>	<b>Progress</b>	<b>2</b>
<b>3</b>	<b>Challenges</b>	<b>3</b>

# 1 Change History

Version: 1.0  
Modifier: Isaiah Martinez  
Date: 2/15/24  
Description of Change: ... ..

---

Version: 0.9  
Modifier: Isaiah Martinez  
Date: 2/15/24  
Description of Change: ... ..

# 2 Progress

Where are we with design/implementation? We've added a little scene for potential pathfinding including a goal post and starting post that a "player" would set up.

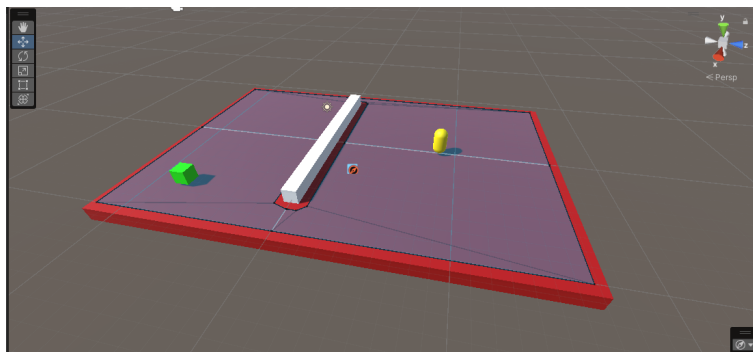


Figure 1: A screenshot of the current pathfinding scene.

The green cube represents the post that the initial start positioned yellow capsule would make its way towards, and the white column in between is an obstacle that the NavMesh has labelled as an obstacle. In the program, the yellow capsule navigates around the column and goes towards the green goalpost. The light blue mapping on the red floor is the current NavMesh Surface baked that tells the start capsule where to go.

Currently, the two posts are set at the beginning of the project. When the game starts, the posts will be wherever they were placed before starting the game during the scene. Moving forward, we will be implementing a UI that the user can place the green goal post and place the starting yellow point and the pathfinding leads to the end.

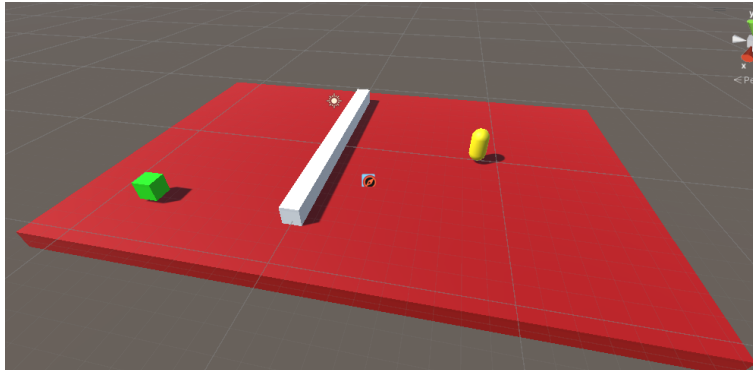


Figure 2: A screenshot of the current pathfinding scene without the NavMesh.

### 3 Challenges

What challenges have occurred for this week? Currently, there is an issue somewhere with the pathfinding code that it won't start moving towards the end goal post (green cube shown above) and there is an issue with the playerwalk variable, which hopefully is an easy fix. There was a challenge with implementing the NavMesh, since it is (or soon will be) a deprecated system in Unity that you need to go out of your way to download through package managing in Unity. The AI window is not a part of Unity by default, that we just needed to download that separately.

### References

- [1] Baker, N. 1966, in *Stellar Evolution*, ed. R. F. Stein & A. G. W. Cameron (Plenum, New York) 333
- [2] Balluch, M. 1988, *A&A*, 200, 58
- [3] Cox, J. P. 1980, *Theory of Stellar Pulsation* (Princeton University Press, Princeton) 165
- [4] Cox, A. N., & Stewart, J. N. 1969, *Academia Nauk, Scientific Information* 15, 1
- [5] Mizuno H. 1980, *Prog. Theor. Phys.*, 64, 544
- [6] Tscharnuter W. M. 1987, *A&A*, 188, 55
- [7] Terlevich, R. 1992, in *ASP Conf. Ser. 31, Relationships between Active Galactic Nuclei and Starburst Galaxies*, ed. A. V. Filippenko, 13
- [8] Yorke, H. W. 1980a, *A&A*, 86, 286
- [9] Zheng, W., Davidsen, A. F., Tytler, D. & Kriss, G. A. 1997, preprint