

# 3D Traffic Modeling in Unity

Group 2:

**Isaiah Martinez**

CSUN

Computer Science Department

isaiah.martinez.891@my.csun.edu

**Jae Molina**

CSUN

Computer Science Department

jae.molina.499@my.csun.edu

**Anastasia Naydina**

CSUN

Computer Science Department

anastasia.naydina.947@my.csun.edu

05/13/2024

## Contents

<b>1</b>	<b>Change History</b>	<b>3</b>
<b>2</b>	<b>Introduction</b>	<b>4</b>
<b>3</b>	<b>Design Goals</b>	<b>4</b>
<b>4</b>	<b>System Behavior</b>	<b>4</b>
<b>5</b>	<b>Logical View</b>	<b>4</b>
<b>6</b>	<b>Scene View</b>	<b>4</b>

# 1 Change History

Version: 0.42

Modifier: Isaiah Martinez

Date: 4/21/24

Description of Change: Finished TomTom API using Python. Made Python Script accessible via Command line.

---

Version: 0.19

Modifier: Isaiah Martinez

Date: 3/29/24

Description of Change: Added API for TomTom to obtain Images of Traffic Flow. Demo car scene implemented. Pathfinding added.

---

Version: 0.11

Modifier: Isaiah Martinez, Jae Molina, Anastasia Naydina

Date: 2/26/24

Description of Change: Simple Car model made. Looked at Related Works for process in utilizing Unity for traffic modeling. Looking for additional related works.

---

Version: 0.09

Modifier: Isaiah Martinez, Jae Molina, Anastasia Naydina

Date: 2/19/24

Description of Change: Discussed High Level Architecture of the project: Unity for modeling, C#/Python for helper script, Python for ML training, and JS for API connectivity. Added template to follow for documentation. Structured git repo directories. First, we will be working on a set amount of locations with small amount of available traffic data. Later, we hope to implement API connectivity to obtain traffic info and map data with more locations.

---

Version: 0.05

Modifier: Isaiah Martinez, Jae Molina, Anastasia Naydina

Date: 2/12/24

Description of Change: Made Git repository. Looked at scholarly articles for related works. Uploaded sample scholarly article to view. Laid out big ideas for project. Began work on models to be used in Unity.

## **2 Introduction**

text  
text

## **3 Design Goals**

text  
text

## **4 System Behavior**

text  
text

## **5 Logical View**

text  
text

## **6 Scene View**

text  
text

## 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