Car Simulator Game – Traffic Rules using Unity 3D.

INFO 5900 - Special Problems

Dr. Sharad Sharma

Project Group 1

Krishna Rahul Mathamsetti

Vineeth Akula

Uday Kiran Reddy kotha

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Introduction

- Car simulator games based on traffic rules are designed to educate and test users' knowledge of traffic rules and road safety. These games simulate realistic traffic scenarios that challenge players to follow traffic rules and regulations, make safe driving decisions, and avoid accidents. The games offer an immersive and interactive experience that engages the user and helps them understand the importance of safe driving practices

- The game has been designed to simulate real-world driving scenarios, including various road obstacles. You will have to navigate through these obstacles while following the traffic.

Game Play

The game is set in a virtual city, where the player takes on the role of a driver and is required to follow traffic rules and regulations, who needs to navigate through various traffic scenarios while following traffic rules and regulations. The game is set up in different scenarios, each of which presents a unique driving challenge.

Game Play

During gameplay, the player encounters various road signs, signals, and other vehicles on the road. The game mechanics require the player to follow the traffic signals, stop at the stop signs, maintain speed limits, give way to pedestrians and other vehicles, and avoid collisions.

STOP:

Game Play

SPEED LIMIT:

Elements in the game

Vision:

- The environment was designed using 3D models of roads, vehicles, buildings, and pedestrians.

- The environment was designed to resemble a real city, with intersections, traffic lights, and different types of vehicles.

Elements in the game

Sound:

- Ambient sounds were added to the environment, such as vehicle sounds, pedestrian sounds, and background noises.

Animation:

- Animated objects were included in the game: traffic lights, pedestrians, and vehicles.
- The traffic lights change color at specified intervals, indicating when the player can proceed.
- Pedestrians walk along sidewalks and crosswalks and follow traffic signals.

Elements in the game

Interactivity:

- User-triggered events were included in the game: starting the game, ending the game, and navigating the vehicle.

- The vehicle can be navigated using keyboard controls.

GAME FINISHED

YOU SURVIVE THE TIME

HOME

Elements in the game

AI Implementation:

- AI functionality was implemented for the behavior of agents, such as pedestrians and vehicles.

- The behavior of agents was programmed to follow traffic rules, such as stopping at red lights and yielding to pedestrians.

Target Audience

According to the Texas Department of Public Safety, approximately 1.5 million driver's licenses were issued in Texas in 2022. This includes both new driver's licenses and renewals.

Traffic rules can change over time due to various reasons such as changes in road conditions, technology advancements, new laws, and regulations, among others. In Texas, the state laws related to traffic rules are updated from time to time. It is important for drivers to stay up-to-date with the latest traffic rules to ensure their safety and avoid getting tickets or fines.

This games lets the audience know about the new rules

Future Versions

A traffic game with different modes, such as state-wise and country-wise modes, can be an engaging and educational tool for users to learn about different traffic rules and regulations in various regions.

In the state-wise mode, the game can focus on the specific traffic laws and driving conditions of different states within a country. Users can select the state they want to learn about and play the game accordingly. The game can also provide information on specific landmarks, road conditions, and other unique features of each state.

In the country-wise mode, the game can focus on the overall traffic rules and regulations of different countries around the world. Users can select the country they want to learn about and play the game accordingly. The game can provide information on specific landmarks, road conditions, and other unique features of each country.

There is also scope to improve in field of Interactivity, realism, AI behavior and need to add other traffic rules.