

Project Proposal: 3D Traffic Racing Simulator

Game Overview

The 3D Traffic Racing Simulator is a straight-road racing simulation developed using Python and PyOpenGL. The player controls a car on a never-ending straight road and must avoid randomly generated traffic vehicles to survive as long as possible. As the game progresses, speed and traffic density increase, making gameplay more challenging.

Game Features

- Straight never-ending road using translation-based motion
- 3D player car with rotating wheels
- Randomly generated traffic vehicles
- Player controls: W/S for speed, A/D for movement
- Dynamic third-person camera system
- Scoring system based on avoided cars
- Increasing difficulty over time
- HUD displaying score, time, and speed

Cheat Mode

- Collision immunity mode that prevents game over when enabled

Extra Features

- Car color customization at start and during gameplay
- Limited reset system with three chances to prevent instant game over