

3D Car Simulation

The final product for this project will be a simplified 3D race-car simulation created using C++ and OpenGL. The objective is to design and construct a clearly defined 3D race car and place it within a minimal environment that allows for basic motion and visual context. The primary focus is the car itself, with the supporting road included only to provide a functional setting for movement.

The completed scene will feature a 3D racing car built from fundamental geometric shapes and assembled into a coherent model. The car will be rendered in perspective and animated so that it appears to move along a road. The road will be represented as a straightforward 3D plane extending across the scene, presented in a way that gives the impression of forward motion as it shifts from right to left. This environment will not include additional surroundings or background elements, ensuring that the attention remains on the car model and its motion.

The development process will involve constructing the car's main components, applying basic transformations, and arranging the geometry to achieve a recognizable race-car form. As the project progresses, incremental adjustments will refine the model, improving proportions, structure, and overall visual clarity. The supporting road will be implemented with simple geometry and consistent visual cues so that the motion of the car is understandable and aligned with the simulation's intended perspective.

Upon completion, the project will present a functional and visually coherent 3D race-car scene that demonstrates fundamental graphics concepts through modeling, perspective rendering, and basic animation. The result will be a clear, straightforward representation of a race car moving along a road within a clean and focused 3D environment.