**COMP5411 Project Proposal**

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# **Project Name**

3D Car Driving Game

# **Overview**

We plan to make a car driving game where the car is able to run on a 3D map. Users can control the vehicle to follow the tracks on the map through the keyboard. Moreover, some rendering effect and light component will be added onto the map in order to make it seems fancy and interesting.

# **Design**

The will be put somewhere at the height field and users can use “W A S D”to control its movement. The users may customize the map by changing the color or other properties. The camera will follow the position of the car.

# **Implementation**

The map will be rendered using WebGL and three.js. We have found some pretty scene rendering results from the Internet and we intend to combine them to create a beautiful scene. As for the car, we will find some obj models from the Internet and import it into our scene in order to give users a better experience.

# **Challenges**

There are a number of challenges. For example, the generation of a proper height field could be difficult as the height field should be interesting to add up to the beautifulness of the scene, but should not be too complex to decrease the frame rate by too much. The lighting of the scene should also be properly considered and implemented with the special effects like shadows to make the scene more fancy.

# **Schedule**

Week 1: Build a basic scene and complete the control logic of the car.

Week 2: Add rendering effects to the map.

Week 3: Add other good ideas that we can come up with.