

AR VR Assignment

1. Introduction to 3D with three.js

Create a simple 3D scene with all elements require to render including following basic geometric shapes.

- Plane
 - Should be created with material that doesn't interact with lighting.
- Box
 - Should automatically rotate on its x and y axis each tick.
- Cone
 - Should be created with material that interacts with lighting.
- Cylinder
 - Should automatically change position from $z = -10$ to $z = 10$ based on sin function
- Sphere
 - Should be place at the centre of the plane.

Add ambient light to the scene.

2 Introduction to A-Frame

Create a virtual reality environment with A-Frame

- It should have a sky with clouds.
- A 3D model of a house should be placed in the centre.
- A video screen should be place right next to the house which the user should be able to play on click.
- A simple geometry should be placed near to the house which changes its location based on user interaction.

3. Exploring Augmented Reality with ARCore

Develop a simple AR application using ARCore

The application should be able to detect plane surfaces.

The user should be able to place virtual objects on the plane surfaces.

Add ambient light.

Submission:

- Screen shot / screen video of the running demo
- Code zip
- Write scope and assumptions as well (if you have any)