

Front-end Intern Three.js/WebGL

Three.js Assignment – Object Highlighter Using Stencil Buffer

Objective:

Create a **3D scene** using **Three.js** where users can **click on any object** (e.g., cubes or spheres), and a **highlight outline** is rendered around the selected object using the **stencil buffer technique**.

Requirements:

◆ Scene Setup:

- Create a Three.js scene with:
 - A ground plane
 - At least **5 different objects** (box, sphere, cone, etc.) placed in a 3D space
 - Directional or point lighting
 - OrbitControls for navigation

◆ Object Interaction:

- Implement **mouse picking** (raycasting) to detect which object the user clicks on.
- When an object is clicked:
 - **Highlight it using a stencil outline** (not just changing color).
 - Only **one object should be highlighted at a time**.

Submission:

- Host your solution on GitHub (public repo).

- Include a README with:
 - Instructions on how to run it

What We're Evaluating:

- Understanding of Three.js scene graph and rendering loop
- Use of **raycasting**, **stencil operations**, and **custom materials**
- Code quality and organization
- Creativity in implementation and UI
- Debugging and problem-solving ability