

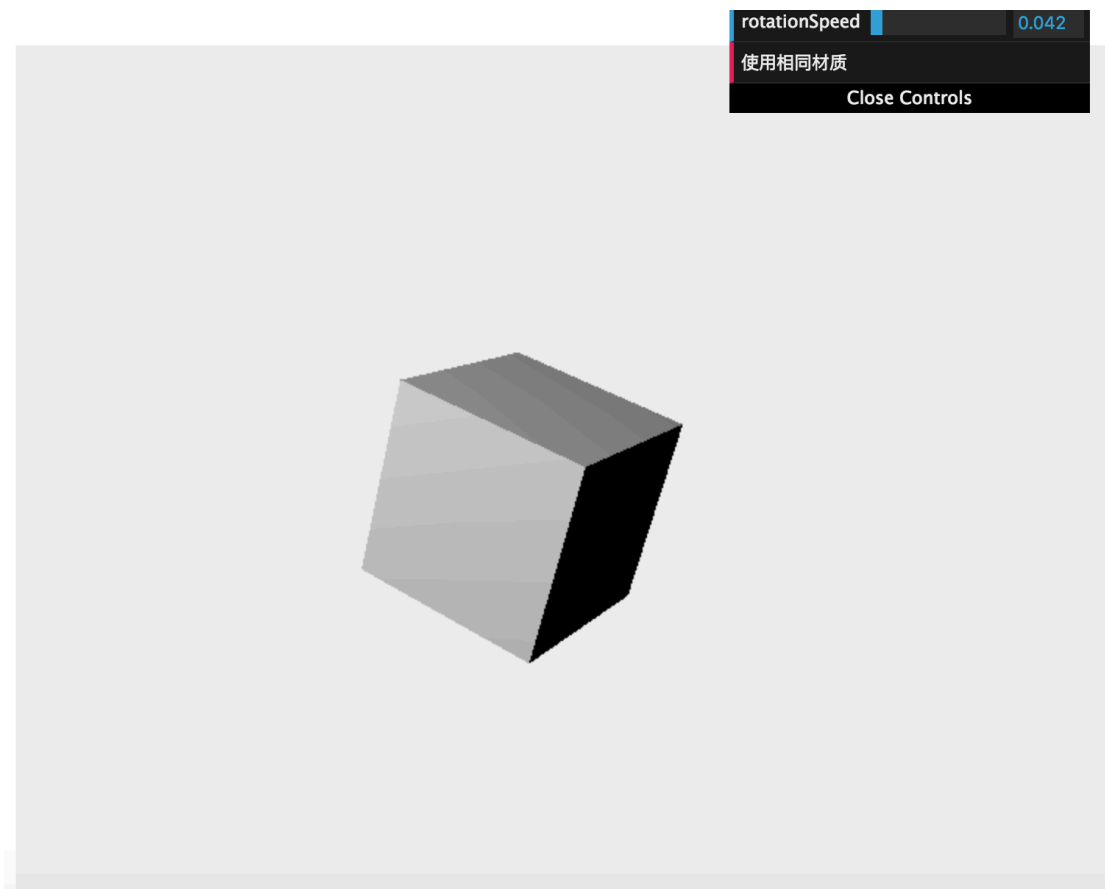
情報可視化論最終レポート

181x225x

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This time I made a cube with GUI controller, which can control the rotationspeed of the cube. And change the color.



First import this function library

```
<script type="text/javascript" src="dat.gui.js"></script>
```

Then make the cube

```

//创建一个场景（场景是一个容器，用于保存、跟踪所要渲染的物体和使用的光源）
var scene = new THREE.Scene();

//创建一个摄像机对象（摄像机决定了能够在场景里看到什么）
var camera = new THREE.PerspectiveCamera(45,
    window.innerWidth / window.innerHeight, 0.1, 1000);

//设置摄像机的位置，并让其指向场景的中心（0,0,0）
camera.position.x = -30;
camera.position.y = 40;
camera.position.z = 30;
camera.lookAt(scene.position);

//创建一个WebGL渲染器并设置其大小
var renderer = new THREE.WebGLRenderer();
renderer.setClearColor(new THREE.Color(0xEEEEEE));
renderer.setSize(window.innerWidth, window.innerHeight);

//创建一个立方体
var cubeGeometry = new THREE.BoxGeometry(10, 10, 10);
//将线框（wireframe）属性设置为true，这样物体就不会被渲染为实物物体
var cubeMaterial = new THREE.MeshLambertMaterial({color: 0xff0000});
var cube = new THREE.Mesh(cubeGeometry, cubeMaterial);
cube.castShadow = true;

//设置立方体的位置
cube.position.x = -4;
cube.position.y = 3;
cube.position.z = 0;

//将立方体添加到场景中
scene.add(cube);

//创建点光源
var spotLight = new THREE.SpotLight(0xffffff);
spotLight.position.set(-40, 60, -10);
spotLight.castShadow = true;
scene.add(spotLight);

```

Build the GUI controller and decide which
to control

```

var controls = new function () {
    this.rotationSpeed = 0.02;

    this.overrideMaterial = function() {
        scene.overrideMaterial = new THREE.MeshLambertMaterial({color: 0x
            ffffff});
    }
};

```

and put the Attributes into this cube.

```
// @ts-ignore: TS2339: Property 'rotationSpeed' does not exist on type 'GUI'.
var gui = new dat.GUI();
gui.add(controls, 'rotationSpeed', 0, 0.5);

gui.add(controls, 'overrideMaterial').name("使用相同材质");
```