

CS247L Lab3

Wednesday April 16, 2014

Please Download

https://github.com/bwang29/cs247l_lab3.git

Today

Web-audio + Three.js

Can be particularly useful for you P4.
25 min intro + 75 min pair programming

Please Download

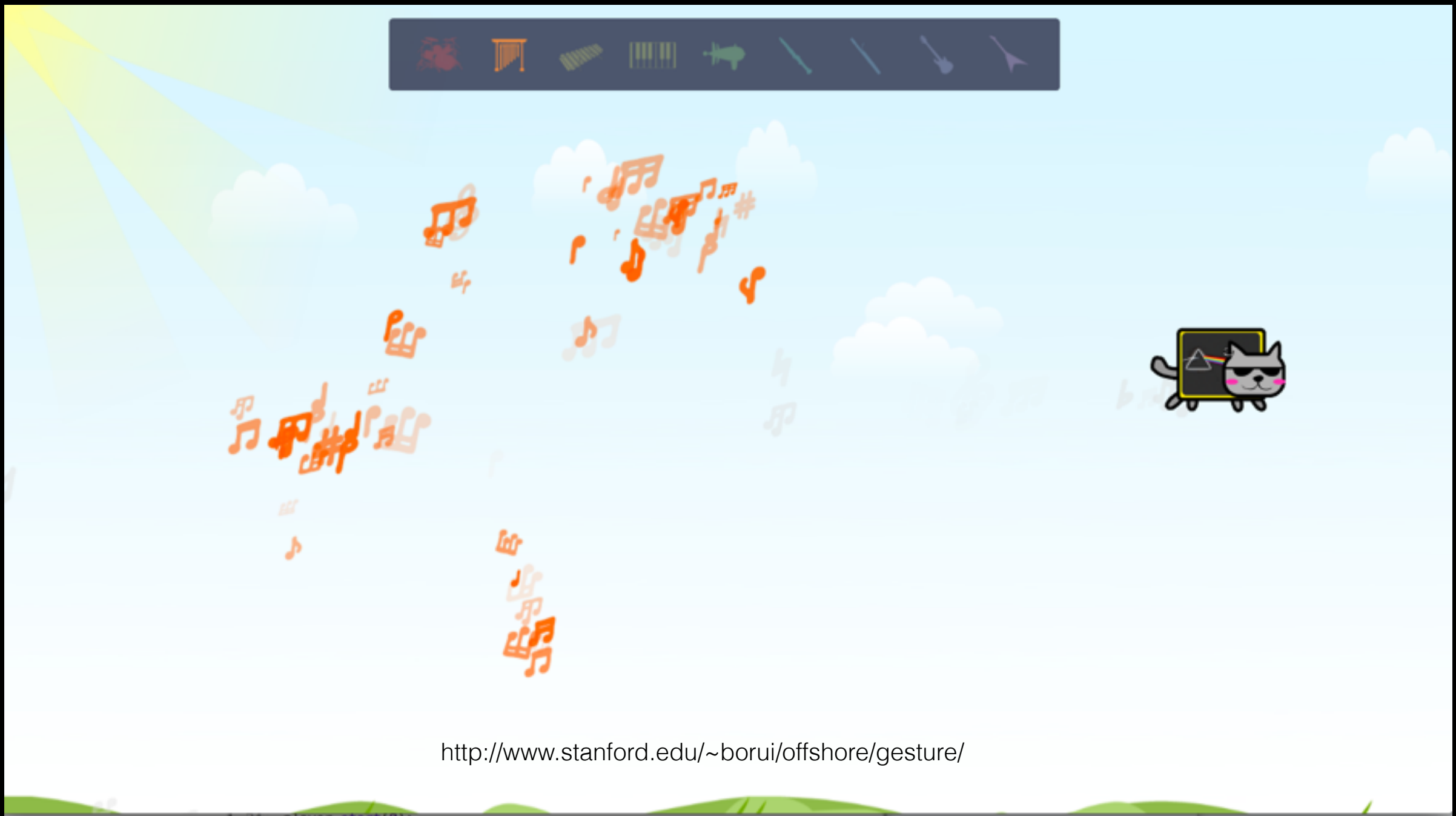
https://github.com/bwang29/cs247l_lab3.git

<http://www.stanford.edu/~borui/temp/176p1/>



<http://mudcu.be/midi-js/>

`MIDI.noteOn(0, note, velocity, delay);`



<http://www.stanford.edu/~borui/offshore/gesture/>

<http://www.html5rocks.com/en/tutorials/webaudio/intro/>

```
1 sound_source = ["a.ogg","b.ogg"]
2 audio_context = new webkitAudioContext();
3 buffer_list_playable = [];
4
5 buffer_loader = new BufferLoader(audio_context,sound_source,buffer_loading_finished);
6 buffer_loader.load();
7
8 function buffer_loading_finished(bufferList) {
9     buffer_list_playable = bufferList;
10    playsound(0);
11 }
12
13 function play_sound(index){
14     player = audio_context.createBufferSource();
15     player.buffer = buffer_list_playable[index];
16     gain_node = audio_context.createGainNode();
17     player.connect(gain_node);
18     gain_node.gain.value = 0.5;
19     gain_node.connect(audio_context.destination);
20     player.start(0);
21 }
```

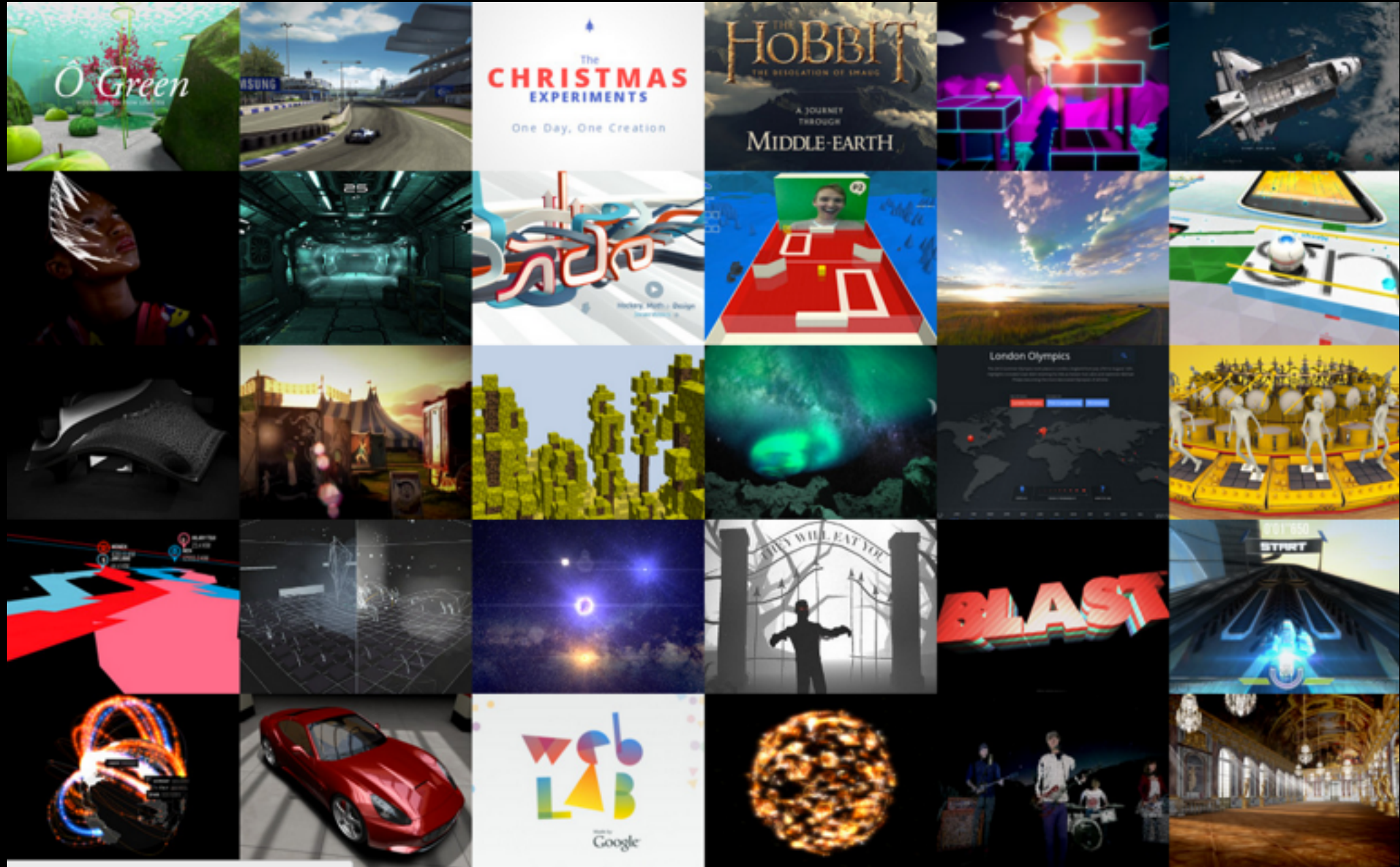
The basic idea of web audio

Sound.js <http://www.createjs.com/#!/SoundJS>

```
createjs.Sound.alternateExtensions = ["mp3"];
createjs.Sound.addEventListener("fileload", createjs.proxy(this.loadHandler, this));
createjs.Sound.registerSound("path/to/mySound.ogg", "sound");
function loadHandler(event) {
    // This is fired for each sound that is registered.
    var instance = createjs.Sound.play("sound"); // play using id. Could also use
    instance.addEventListener("complete", createjs.proxy(this.handleComplete, this))
    instance.volume = 0.5;
}
```

Three.js (WebGL, Canvas, CSS 3d, SVG)

Scene, Camera, Objects, Renderer



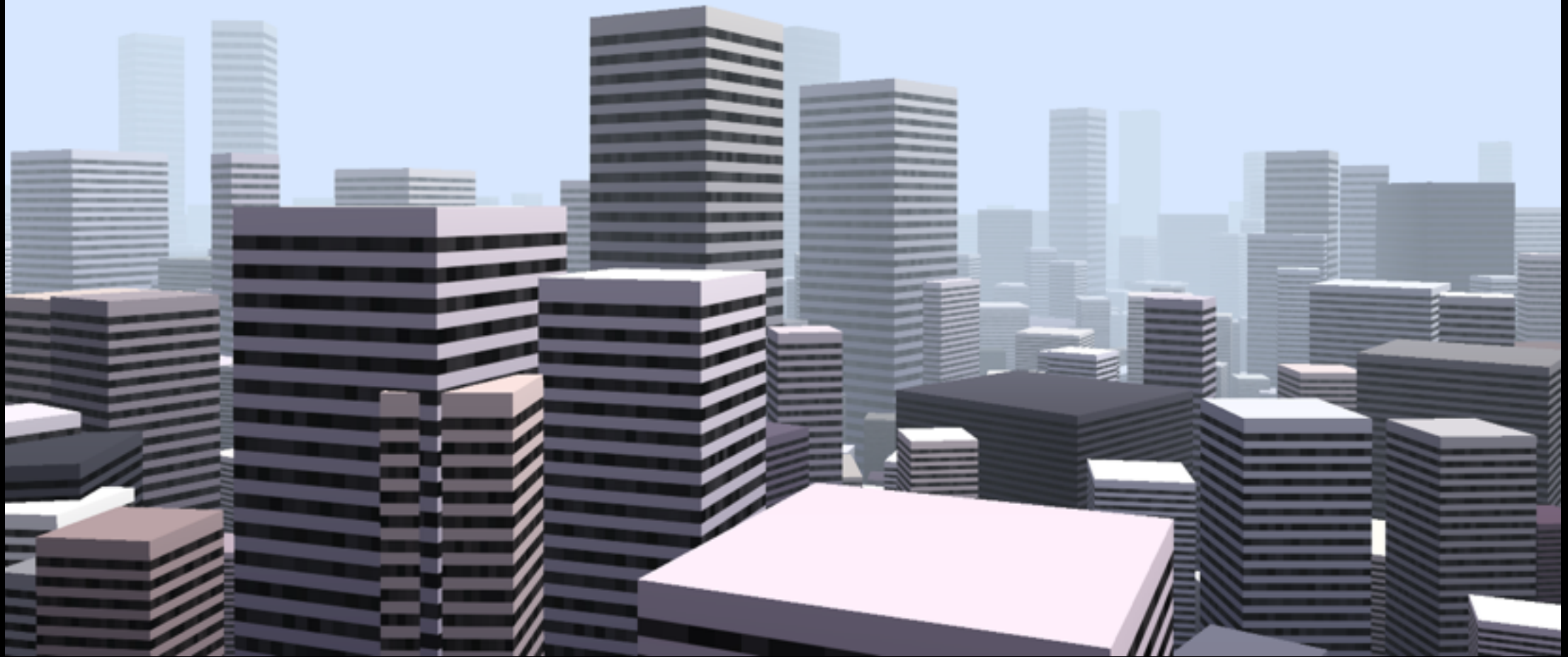
<http://threejs.org/>

Scene, Camera, Objects, Renderer

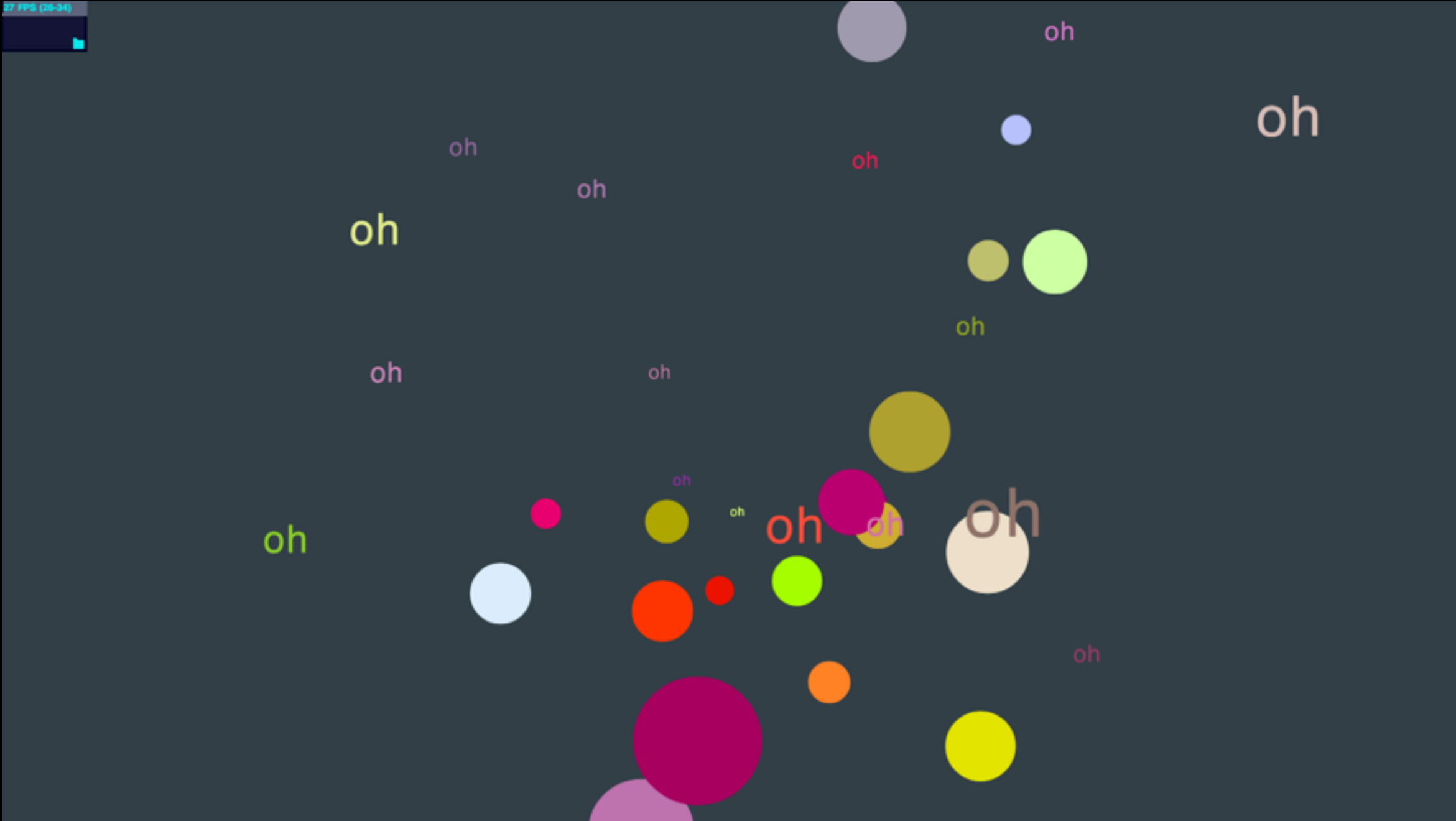
```
1 <html>
2   <head>
3     <title>My first Three.js app</title>
4     <style>canvas { width: 100%; height: 100% }</style>
5   </head>
6   <body>
7     <script src="three.min.r66.js"></script>
8     <script>
9       var scene = null;
10      var camera = null;
11      var renderer = null;
12    </script>
13  </body>
14 </html>
```

Let's get started

click and hold to move forward



80 lines of code



30 lines of code

Your task

- 1) figure out what `cs247_lab3_rotating_canvas` does.
- 2) do a chat application leveraging the `cs247_lab3_rotating_canvas` and sound (sound files under the `sound` folder).

Find a pair !

+ Web Audio



Source code available on [Github](#)
Try to drag & drop your MIDI files to play

<http://qiao.github.io/euphony/>