

# EE267 Project Proposal

Brad Huang  
Department of Computer Science  
Stanford University  
brad0309@stanford.edu

Vivian Yang  
Department of Electrical Engineering  
Stanford University  
viviany@stanford.edu

May 28, 2017

## Abstract

In our project, we are using Unity to build a sound-based VR game, which mainly focuses on the player's head orientation, sound input and the sound location in the background of our game.

## 1 Introduction

Our game is a first-person sound-based VR game. In our game, player is standing in the middle of an ancient dungeon, whose ceiling is covering by webs, and the spiders are climbing out from all directions. Player needs to concentrate on hearing where is the sound come from to locate the spider, and turn their head to the correct position to activate an action by making a sound or voice. If the player fails to make an action before the spider jumps toward he or she(e.g. 3 seconds after hearing the sound of the spider), the player will be attack by the spider and the game will end. The score is counted by how many spider does the player beat back before the game ends. To fulfill this goal, keeping track of the head orientation of the player, the input sound and carefully managing the sound location is very important.

## 2 Related Work

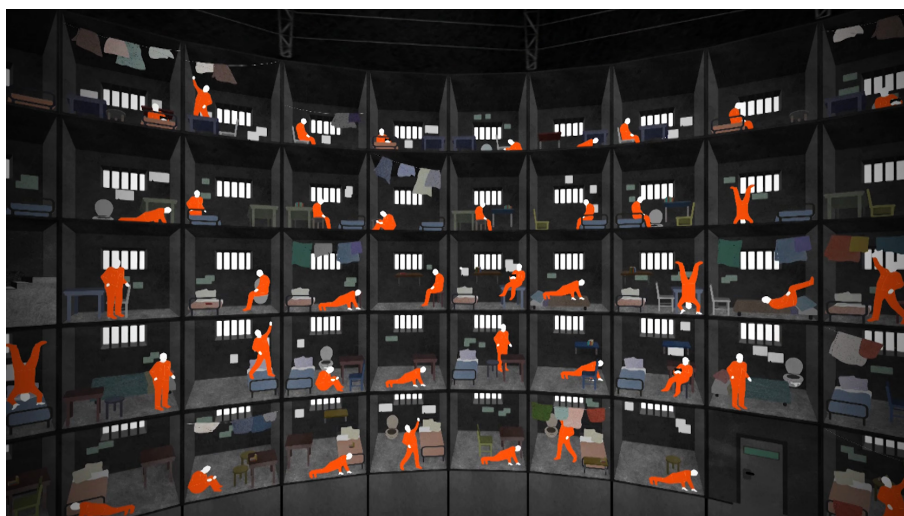


Figure 1: Snapshot of PANOPTICON: watch or be watched

Our project is inspired by the game, PANOPTICON: watch or be watched, created by [Panoptic Lab](#). In this game, player is the warden of a prison operated by a private

company, whose job is to make sure that inmates don't escape during warden's eye shift. The only weapon that player has is a whistle that triggers the closing mechanism of a cell in order to isolate its rebelling dweller and prevent his or her escape. At the end of the day, player will be judged on the efficiency at keeping inmates from leaving.

### 3 Time line

Week	Progress
May 22	Find 3D Models
May 29	Build Game Environment
June 5	Apply Technical Functions
June 9	Poster Session