

# Ha! To Control (HTC)

## Group 7

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## Motivation

Imagine a scenario, when you want to control the computer, but you are too far away from the keyboard or mouse. All you want is just a simple instruction, you don't want to go all the way to the computer, and this is where the voice comes into play. If you can give instructions with voice, instead of sitting in front of the computer all the time, you can lie comfortably on the sofa and just give instructions with your voice.

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## Implementation

However, it's not an easy job to do all instructions with voices, due to the complex background, and the need to deal with possible errors that will shut down the computer. Furthermore, it cannot be well presented because the topic isn't that interesting. So we narrow it down to using voice to control characters in a game. Temporarily we decide to implement it on a game called Little Fighter 2 (LF2), in which you can control a character and fight with each other, and there are several combinations of set of keys that we can do some cool moves.

We want to do some kind of plugin, such that we can control the keyboard through voice. In detail, we record the voice and pair the voice with a key or a set of keys, which can constitute a move, and when testing, speak out the voice and see if the set of keys are pressed (whether there is a move). Note that the keys should not be pressed if the voice aren't similar enough, so this process involves recognizing the voices, and judge whether it belongs to a pair of voice and a set of keys. In basic mode, we test under an environment without noise, and only one person takes control.

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## Advanced Goals

If we have time to finish the basic features, we go to the advanced ones. In the advanced setting, we want to detect voices in a far more complex context. With noises all over around, multiple persons speaking, and also, we want to detect who owns the voice. Since we don't know the possibility of having this done yet, we will depend on the situation and make some amendments.