**CHAPTER 4**

**SYSTEM FUNCTIONALITY**

**4.1 Introduction**

There are three sections in this chapter, which are System Architecture, Test Plan, and Test Results. The system architecture section describes the relations among the parts of the system. The test plan is used to test each function of the system. The Test Results section concludes with the results of testing the program.

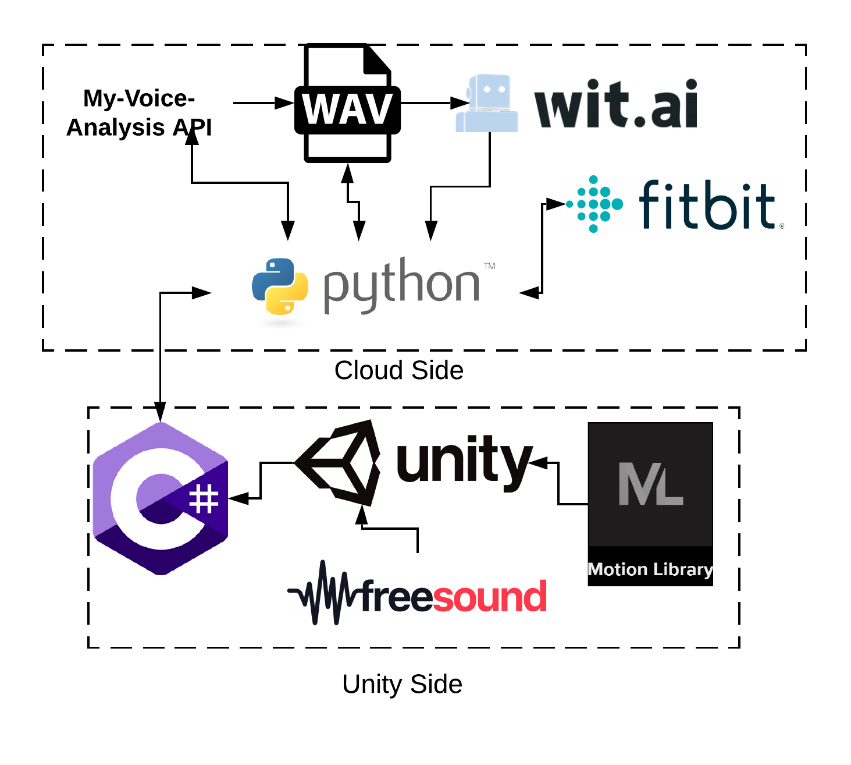
**4.2 System Architecture**

Figure 4.1: System Architecture

Figure 4.1 describes the architecture in the system of VR Speech which has two main parts which are the Cloud API part and Unity part. The game is created using Unity which is a software that allows users to create game environments that can put any animation or texture. In Unity, we use two libraries which are Motion Library which responsible for audiences’ animation. Another library is Freesound which allows us to use realistic sound effects in our game. Then we use various API through python to able to analyze the user’s voice at the end of each session.

**4.2.1 System Functionality**

The VR Speech software allows the user to do a presentation following their script for many times which allow the result to be used as a comparing tool of user’s performance when they are speaking the same script for many times. This software can be beneficial for people who want to practice public speaking at home. The application will detect the voice, hand gesture, head direction and then analyze and show the results. After users finished their speech, then can press stop and see the result at the end of session.