

ABSTRACT

Speech to Text is a system that converts voice into text. This system consists of two components, the first component processes the acoustic signal captured by the microphone and the second component interprets the processed signal, then maps the signal into words.

In this final project the author makes a smart Speaker system in which there is a Speech to Text system, which is useful for providing convenience, especially for people with special needs and the elderly in controlling electronic equipment using only voice. The smart Speaker functions to convert voice commands into text that will be stored in the Internet of Things (IoT)-based cloud. Voice processing will be processed using Google API.

The system built can be used to detect sound at a maximum distance of 2.1 meters from the user for commands to turn on/off the lights, control the color of the lights and their intensity. The distance with the best accuracy from the test is at a distance of 50 cm with an accuracy of 91%. From the test, it can be concluded that the farther the distance, the louder the intensity of the sound required and the response time will also be longer. The power required in this system is an average of 3.08 watts.

Keywords: Smart Home, Speech to Text, Internet of Things, system.