

## Patient-Friendly Hand Gesture Recognition Using AI

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**Abstract :** During the tough times of covid, those people who were hospitalized found it difficult to always convey what they wanted to or needed to the attendee. Sometimes the attendees might also not be there. In that case, the patients can use simple hand gestures to control electrical appliances (like its set it for a zero watts bulb)and three other gestures for voice note intimation. In this AI-based hand recognition project, NodeMCU is used for the control action of the relay, and it is connected to the firebase for storing the value in the cloud and is interfaced with the python code via raspberry pi. For three hand gestures, a voice clip is added for intimation to the attendee. This is done with the help of Google's text to speech and the inbuilt audio file option in the raspberry pi 4. All the five gestures will be detected when shown with their hands via the webcam, which is placed for gesture detection. The personal computer is used for displaying the gestures and for running the code in the raspberry pi imager.

**Keywords :** nodeMCU, AI technology, gesture, patient

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