



**SYNOPSIS ON**  
**SMART GESTURE SYSTEM USING IOT**

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## **INTRODUCTION**

In Smart gesture System we are going to handel a screen with the help of hands in which we are adding motion sensors which controls are laptop by the behaviour of our hands. There are several ways to capture a human gesture that a computer would be able to recognize. The gesture can be captured using distance measurement, camera, or a data glove or by the help of ultrasonic distance sensors. Gestures can also be captured via Bluetooth or infrared waves, Acoustic, Tactile, optical or motion technological means. The embedded systems designed for specific control functions can be optimized to reduce the size and cost of the device and increase the reliability and performance.

## **EXISTING SYSTEM**

This project consists of mainly three components – Arduino Uno, Ultrasonic sensors, and a laptop. The ultrasonic sensors hooked to the Arduino are used to determine the gestures and the distance of the hand from the ultrasonic sensors. The code loaded in Arduino finds the respective keyword for the distance found and sends it to Windows OS. Python code that runs in the background recognizes the keywords and generates the corresponding virtual

## **USE OF THE PROJECT**

The purpose of gesture recognition in Computers has always been the minimization of the distance between the physical world and the digital world. The way humans interact among themselves could be implemented in communication with the digital world by interpreting gestures via mathematical algorithm. Numerous ways and algorithms have been proposed and implemented to achieve the goal of gesture recognition and its use in communicating with the digital world. Gestures can be tracked using hand movements, accelerometers and more.

# **IDEA**

Yes we have select this idea because in future we need not to do hard work. We need to do smart work in which we can easily handle our things on our fingertips and its saves time and money . To buy all the output accessories like mouse, joystick etc.

## **FUNCTIONAL SPECIFICATION**

In This are laptop or computer screen our working with the help of hand gesture

- ULTRASONIC DISTANCE SENSORS

In this they record the movement of our hands .

- Arduino Nano UNO / Rasberry (Pi)

All the system and the command are stored in this . it is like the system of the brain

## **Software Specification:**

- Technology Implemented : Internet Of Things
- Language Used : C & Python
- Database : NA
- User Interface Design : Arduino
- Web Browser : NA

## **Hardware Requirements:**

- Processor : i3 and so on
- Operating System : windows 10
- RAM : 8Gb-16Gb
- Hardware Devices : Ardunio Uno Nano/ Raspberry (pi) ,2 Ultra sonic distance sensors,
- : Connecting wire ,male to male,
- : female to male ,female to female ,USB to C-type
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- Hard disk : More than 10Gb
- Display : 13.7inc to 21.7inc

## **FUTURE SCOPE**

It can be updated in future and then the full computer will be control by gestures. It can minimize the usage of keyboard and also it can minimize human effort