

GESTURE BASED INTELLIGENT HOME AUTOMATION SYSTEM USING IOT

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ABSTRACT

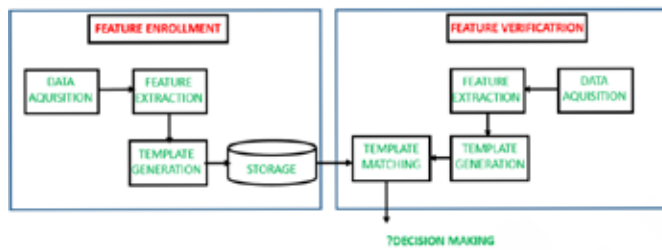
Dynamic hand gesture tracking and recognition system can simplify the way humans interact with computers and many other non-critical consumer electronic equipment. Digital image processing is the techniques, which is reduces the time consumption and human errors. Digital image samples acquired by the preferable standard digital camera. The shape of human hand gesture is segmented by using suitable image processing techniques. Segmented data samples are recognizing the predefined gesture sign using pattern and geometrical matching algorithms. Operation executed according to the corresponding gesture sign. Using Internet of things, actions of controlling the devices into user defined.

I. INTRODUCTION :

To define appropriate gesture identification for particular operation. Create template for the particular gesture. To match template into the real-time data samples. To control the device from anywhere into anyplace. It controls the number of devices with the number of gesture defined. To implement and trained with internet of things. The shape of human hand gesture is segmented by using suitable image processing techniques. Segmented data samples are recognizing the predefined gesture sign using pattern and geometrical matching algorithms.

II. WORKING :

BLOCK DIAGRAM



In block diagram we have two divisions one is feature enrolment another one is future verification .feature enrolment will input samples to the future verification .The first block of future enrolment is data aqistion will collet the input samples .second step of future entrolment is feture extraction it will create a template and then template generation it will generate some kind of samples all samples are stored in storage (my rio).My rio has some space to store the templates .And then future verificaton ,already we had stored some kind of gestures and then template matching means,matching of gestures and then storage ,finally out put will come.

III. REQUIREMENTS :

- LabVIEW 2014 32-bit.
- MyRIO 1900 with its accessories.
- Digital Camera.
- Relay boards.
- Output devices (Household devices).
- STEP-5: Identification of the gesture for the corresponding device to run.

FRONT PANEL FOR MATCHING GESTURE WITH DEVICE-1



From above diagram the gesture shown figure 1 ,so the device 1 will be on

FRONT PANEL FOR MATCHING GESTURE WITH DEVICE-2



Here the person shown gesture 2,so the device 2 will be on

FRONT PANEL FOR MATCHING GESTURE WITH DEVICE-3



Here the person shown gesture 3,so the device 3 will be on

FRONT PANEL FOR MATCHING GESTURE WITH DEVICE-4



Here the gesture is 4 ,the device 4 will be on

FRONT PANEL FOR MATCHING GESTURE WITH DEVICE-5



Here the gesture is 5 so the the device 5 will be on

IV. EXPERIMENTAL RESULTS

Validation parameters	Outputs
Number of input samples	25 samples
Number of gestures defined	5
Number of gestures identified out 25 samples	23
Accuracy of the gestures identification	gs1 gs2 gs3 gs4 gs5 100% 100% 100% 100% 100%

We have 25 input samples in our outputs and we have defined 5 gestures and 23 gestures identified out of 25 samples, gesture 1 will be identified 100 percentage and gesture 2 will be identified 100 percentage, gesture 3 will be identified 100 percentage and gesture 4 will be identified 96 percentage, gesture 5 will be identified 96 percentage.

V. CONCLUSION

Compared with the existing gesture detection approaches, the shape of the gesture detection is

much more accurate and efficient. This approach could detect gestures successfully in an uncontrolled environment with complex background. Compared with conventional approaches, this method is much faster and the performance is also not bad.

VII. REFERENCES

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