Mansoura University
Faculty of information and computer sciences
Dep. Computer science
5/3/2022

Hand Gesture Recognition System

Abstract:

Hand gesture is one of the methods used in sign language for non-verbal communication. It is most used by deaf & dumb people who have hearing or speech problems to communicate among themselves or with normal people.

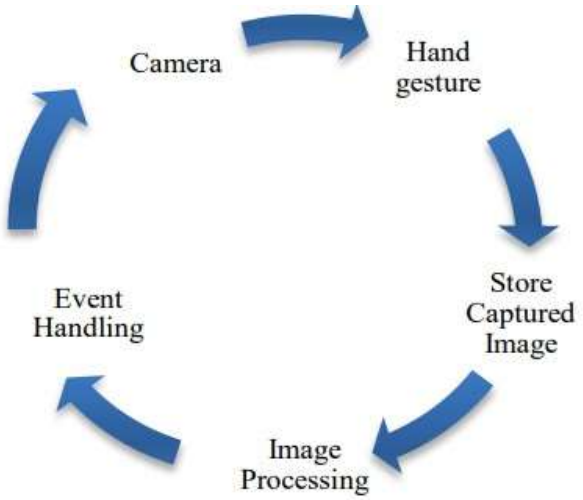
Problem statement:

"Hand Gesture Recognition Using Camera" is based on concept of Image processing. In recent year there is lot of research on gesture recognition using Kinect sensor on using HD camera, but camera and Kinect sensors are more costly.

Proposed system:

In this paper we introduce software which presents a system prototype that is able to automatically recognize sign language to help deaf and dumb people to communicate more effectively with each other or normal people and control their computer using simple web camera.

Workflow of the system:



Agent design (PEAS):

1. Performance: correctness, quick response, accurate detection.
2. Environment: user.
3. Actuators: screen.
4. Sensors: web cam.

Environment prosperities (ODESDA):

1. Fully Observable.
2. Deterministic
3. Sequential.
4. dynamic.
5. Discrete.
6. Single agent.

Agent type: Rational.

Team members:

- Lama Tarek Abbas Moustafa.
- Mariam Kamal Kamal El-said El-Sherbini.

Supervisors:

Dr. Sara El-Metwally.

Eng. Mai Bedair.

Eng. Amany Shreif.