Gesture based interactive system

You can implement an interactive system using hand gestures. Hand gesture recognition is difficult. But you can use color markers to make the gesture recognition much easier. A marker based system uses makers on top of each finger and captures marker position from each image. It can generate 2D hand motion pattern information.



In this project, you may implement a marker based interactive system to select an object (such as an image), move it and resize it. You can implement other similar actions instead.



Reference paper:

Hand Gesture Interaction Using Color-Based Method For Tabletop Interfaces, http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6051717

If you feel difficult to implement the above ideas, you can also use existing libraries to control systems using gesture. Javascript Hand Gesture Plugin (JSHG) is a plugin that allows you to support the hand gesture recognition of users through web camera. It currently offers the basic set of hand gestures which include the position of hand (left, right, up, down) and counts the number of fingers. You can use JSHG to control an application. Implement a simple interactive system (such as selecting an image and then moving it) based on JSHG.

The homepage of JSHG provides two examples including HTML5Slides and Google Earth:

https://nhudinhtuan.github.io/jshg/