

## Part 3 Expansion of project specific ideas

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**Human-Computer Interaction --- Poster Generator --- Using machine learning to recognize the meaning of gestures, photos can generate random style posters.**

### **Examples of gesture interaction/artistic work**

Move the control interface selection by gesture position

<https://www.youtube.com/watch?v=Hczwc6HK5Kw>

Draw with gestures

[https://www.youtube.com/watch?v=Az\\_kdUUZQ1Q](https://www.youtube.com/watch?v=Az_kdUUZQ1Q)

Detect hand through webcam and trigger sound tutorial

<https://www.youtube.com/watch?v=ZmRectS7opw>

### **Design motivation**

Hope to study the visual effect feedback of gesture interaction

### **Project Goals:**

- 1.Combine simple visual effects to create filters based on different gestures.
- 2.Use machine learning to match photos with different styles of posters.
- 3.Output some interesting visual graphic posters

### **My project process**

1. Input gestures and transform graphics in real time according to the gestures.
2. Input gestures, the effect of gesture switching is equal to the remote control,
3. Input gestures, the position of the hand moves as a brush function

### **Insight**

At present, the interactive effects of many gestures are directly controlled by gestures to obtain some fixed effects and pictures. I hope to use machine learning

to train gesture classification and control some elements to indirectly get some unexpected random effects, so as to break the mode of thinking that gesture interaction only outputs fixed results.

## Project detail

Poster: consists of three layers of content, the first layer-photos, the second layer-graphics, and the third field-painting content.

Output:

1. Base map (Photo: color)
2. Graphics (GUI: countX, stepX, twistX, Scale, color)
3. Paintbrush (GUI: colors, size, mouseX, mouseY)

## Effect



