Implementation

Define Region of Interest:

Fix coordinates of the rectangle

Color Extraction

Define upper and lower bounds of the glove

Hand Location:

Mask the color in range and blur it against the bg

Hand Region Detection:

Draw contours around the maximum area

Draw Defect Points:

Compare angle between fingers and draw circles

Gesture Determination:

Using area ratios and defect points

Color Extraction

Region Detection

- Examine bounding box.
- Find colors in range [180 255].
- Mask colors in the range with white and all others with black.



Area Estimation

- Find area of the contour of the image and area of the maximum contour, i.e. the hand.
- Find the area ratio:
 arearatio = ((areahand areacnt) / areacnt) * 100
- Calculate the angle between two fingers and distance between contour and point.
- if angle <= 90 and d > 30: Draw Circle.



