# OpenCV

Practice Project:

<https://github.com/Bangbiu/OpenCVPracticing.git>

## Fundamental:

### cv2

#### Data Reading

1. Read Image

imread(<PATH>)

1. Show image

imshow(<WindowName>, <IMAGE>)

1. Pause until Key Press

waitKey(<MILISEC>)

1. Read Video

VideoCapture(<PATH>)

1. Read Webcam

VideoCapture(<Channel>) #1

#### Image Processing

1. Convert Color Mode 2 Gray

cvtColor(<IMAGE>, cv2.COLOR\_BGR2GRAY)

1. Blur

GaussianBlur(<IMAGE>,<Kernel Size 2D>,<SigmaX>)

1. Canny

Canny(<IMAGE>,<threshold1>, <threshold2>)

1. Dilate

dilate(<IMAGE>, <kernel>, <iterations>)

1. Erode

erode(<IMAGE>, <kernel>, <iterations>)

1. Resize

resize(<IMAGE>, <SIZE 2D>)

#### Sketching

1. Line

line(<IMAGE>,<StartPT>, <EndPT>,<Color>, <Thickness>)

1. Rectangle

rectangle(<IMAGE>,<PT1>,<PT2>,<Color>, <Thickness>)

1. Circle

circle(<IMAGE>, (300,300),100,(255,255,0),3)

1. Text

putText(<IMAGE>,<TEXT>,<Origin>,<Font>,<Size>,<Color>,<Thickness>)

#### Transformative Perspective:

getPerspectiveTransform (<OriginalPTs4>,<TargetPTs4>)

warpPerspective(<IMAGE>, <MATRIX>,<SIZE 2D>)

Links:

Tutorial pose estimation

<https://github.com/cmu-perceptual-computing-lab/openpose>

<https://www.youtube.com/watch?v=4FZrE3cmTPA>

https://www.youtube.com/watch?v=9jQGsUidKHs