**Python OpenCV Cheat Sheet**

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| **Basic Operations** | | **GUI Handling** | |
| //images  cv2.imread(img, flags)  cv2.imshow(name, img)  cv2.imwrite(name, img)  //videos  cap = cv2.VideoCapture(source)  cap.isOpened()  cap.open()  cap.get(propId)  cap.set(propId, value)  ret, frame = cap.read()  cap.release()  fourcc = cv2.VideoWriter\_fourcc(format)  out = cv2.VideoWriter(name, fourcc, fps, (width,height))  out.write(frame)  out.release() | #read an image  #show an image  #write an image  #create video source  #test if source is open  #open source  #get source property (id [0;18])  #set source property to value  #read one frame  #release the video source  #create video writer object  #write frame to output video  #release output video | cv2.waitKey(N)  cv2.destroyAllWindows()  cv2.namedWindow(name, flags) | #wait key for n milliseconds  #destroys all windows  #create an empty window |
| **Image Transformations** | |
| cv2.cvtColor(frame, flag) | #convert colors (e.g. to grayscale) |
| **Drawing on Images** | |
| cv2.line(img, (c1,c2) ,(c3,c4), color, thickness)  cv2.rectangle(img, (c1,c2), (c3,c4), color, thickness)  cv2.circle(img, (c1,c2), r, color, thickness)  cv2.ellipse(img, (c1,c2), (maxa,mina), rot, startA, endA, color, thickness)  cv2.polylines(img, pts, isClosed, color)  cv2.putText(img, text, pos, font, scale, color, thickness, lineType) | #draw a line  #draw a rectangle  #draw a circle  #draw an ellipse  #draw a polygon  #add text to image |
| **SEC1** | | **SEC2** | |
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