

Image Processing
Home work 07
Image Compressions

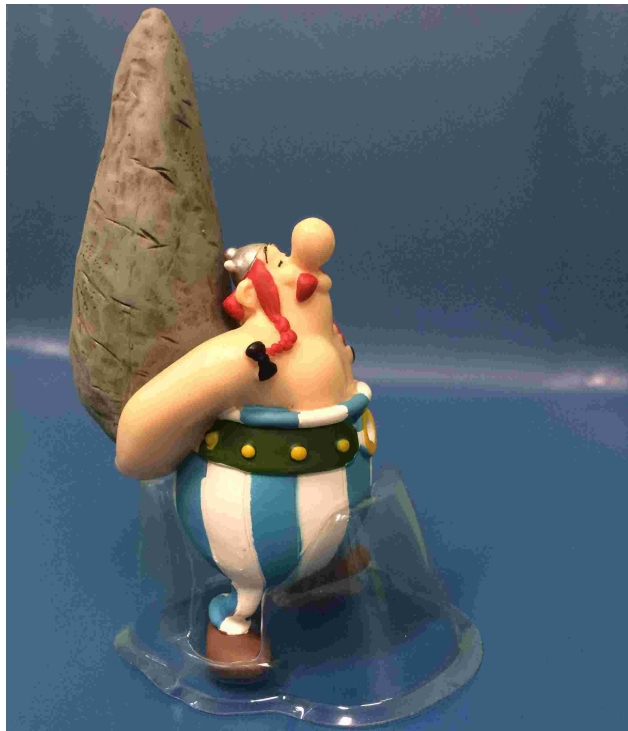
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May 10, 2016



(a) Original



(b) Opencv compression



(c) My way Compression

Fig. 1: Shows compression comparison between original , opencv compression , my way compression

```

1 import cv2
2 import numpy as np
3 from math import floor
4 def showing(img):
5     cv2.namedWindow("test", cv2.WINDOW_NORMAL)
6     img = np.array(img,dtype=float)/float(255)
7     cv2.imshow('test',img)
8     cv2.resizeWindow('test',600,600)
9     cv2.waitKey(0)
10
11 def reading(name):

```

```

12     return cv2.imread(name)
13
14 obe = reading( 'Obelix.jpg' )
15
16 def compressWay1(obe, quality):
17     cv2.imwrite( 'obe.CV2-{}.jpg'.format(quality), obe, [int(cv2.IMWRITE_JPEG_QUALITY), quality] )
18
19 def compressWay2(obe, quality):
20     lvls = floor(quality*255/100)
21     step = floor(255/lvls)
22     value = floor(step/2)
23     print 'levels:{},step:{},value:{},quality:{}'.format(lvls,step,value,quality)
24     nm = []
25     for i in range(256):
26         nm.append(value)
27         if i%step==0 and i!=0:
28             value+=step
29     table = np.array(nm)
30     obe = cv2.LUT(obe, table)
31     cv2.imwrite( 'obe.MYWAY-{}.jpg'.format(quality), obe)
32     print nm
33
34 compressWay1(obe,10)
35 compressWay2(obe,10)

```