

Image Processing
Home work 07
Image Compressions

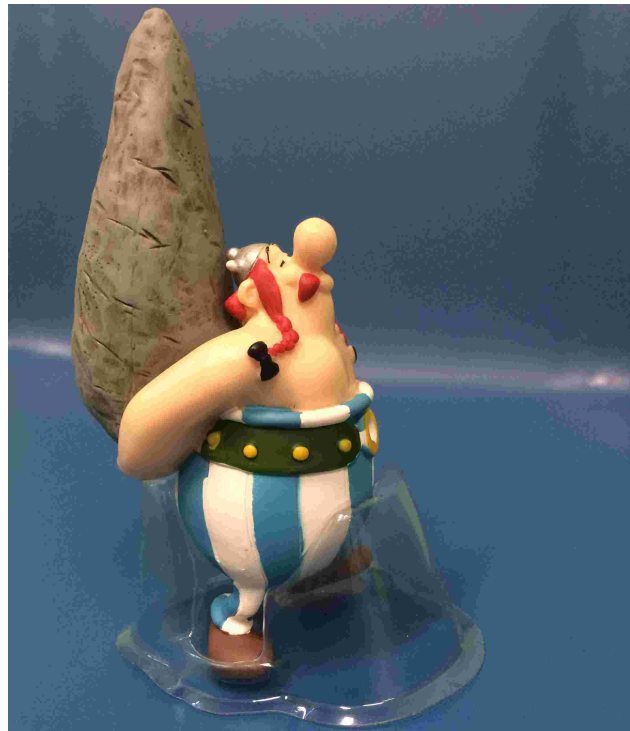
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(a) Original



(b) Opencv compression



(c) My way Compression

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

To accomplish the previous results I used the following code :

```

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)

```

Note:All images,.tex,.pdf,.jpg,.py etc.. files exist on Github

E.O.F