How to ruin pics in a very complex and unesesary way

(Haarwavelet)

Code

compression

```python
23  def HaarWavelet(array):
24      haararray=np.zeros((array.shape[0],array.shape[0]))
25      for i in range(haararray.shape[0]):
26          haararray[i//2,i]=sqrt(2)/2
27          haararray[-i//2-1,-i-1]=-sqrt(2)/2
28      for i in range(haararray.shape[0]//2):
29          haararray[-i-1,-2*i-1]=sqrt(2)/2
30      b=dot(haararray,array)
31      haararray1=np.zeros((array.shape[1],array.shape[1]))
32      for i in range(haararray1.shape[1]):
33          haararray1[i//2,i]=sqrt(2)/2
34          haararray1[-i//2-1,-i-1]=-sqrt(2)/2
35      for i in range(haararray1.shape[1]//2):
36          haararray1[-i-1,-2*i-1]=sqrt(2)/2
37      t=np.transpose(haararray1)
38      e=dot(b,t)
39      sm.imsave('AAA.jpg',e)
40      aa=e[:e.shape[0]//2,:e.shape[1]//2]
41      sm.imsave('aa.jpg',aa)
42      ab=e[:e.shape[0]//2,e.shape[1]//2:]
43      sm.imsave('ab.jpg',ab)
44      ac=e[e.shape[0]//2:,:e.shape[1]//2]
45      sm.imsave('ac.jpg',ac)
46      ad=e[e.shape[0]//2:,e.shape[1]//2:]
47      sm.imsave('ad.jpg',ad)
48      return e
```

```python
13  def Converttoarray(x):
14      array=sm.imread(x , True)
15      if array.shape[0]%2==1:
16          array=array[:-1,:]
17          if array.shape[1]%2==1:
18              array=array[:,:-1]
19      elif array.shape[1]%2==1:
20          array=array[:,:-1]
21      return array
```

```python
50  def Revert(array):
51      haararray=np.zeros((array.shape[0],array.shape[0]))
52      for i in range(haararray.shape[0]):
53          haararray[i//2,i]=sqrt(2)/2
54          haararray[-i//2-1,-i-1]=-sqrt(2)/2
55      for i in range(haararray.shape[0]//2):
56          haararray[-i-1,-2*i-1]=sqrt(2)/2
57      haararray1=np.zeros((array.shape[1],array.shape[1]))
58      for i in range(haararray1.shape[1]):
59          haararray1[i//2,i]=sqrt(2)/2
60          haararray1[-i//2-1,-i-1]=-sqrt(2)/2
61      for i in range(haararray1.shape[1]//2):
62          haararray1[-i-1,-2*i-1]=sqrt(2)/2
63      f=dot(np.transpose(haararray),dot(array,haararray1))
64      sm.imsave('AAC.jpg',f)
65      return print('hi')
66
67  def HaarIterate(array,t=1):
68      for i in range(t):
69          HaarWavelet(array)
70          array=Converttoarray('aa.jpg')
71      ab=Converttoarray('ab.jpg')
72      ac=Converttoarray('ac.jpg')
73      ad=Converttoarray('ad.jpg')
74      m=column_stack((array,ab))
75      n=column_stack((ac,ad))
76      mn=vstack((m,n))
77      return mn
```

Code

- Without

```python
def Nomatrixcompress(array):
    Non=zeros((array.shape[0],array.shape[1]))
    for n in range((array.shape[0])//2-1):
        for m in range((array.shape[1])//2-1):
            Non[n,m]=(array[n*2,m*2]+array[n*2,2*m+1]+array[2*n+1,2*m]+array[2*n+1,2*m+1])/4
            Non[n,array.shape[1]//2+m]=(-(array[2*n,2*m])+array[2*n,2*m+1]-array[2*n+1,2*m]+array[2*n+1,2*m+1])/4
            Non[array.shape[0]//2+n,m]=(-(array[2*n,2*m])-array[2*n,2*m+1]+array[2*n+1,2*m]+array[2*n+1,2*m+1])/4
            Non[array.shape[0]//2+n,array.shape[1]//2+m]=(-array[2*n,2*m]+array[2*n,2*m+1]+array[2*n+1,2*m]-array[2*n+1,2*m+1])/4
    sm.imsave('AA#.jpg',Non)
    Non=Non[:Non.shape[0]//2,:Non.shape[1]//2]
    sm.imsave('AA#2.jpg',Non)
```

Comp 1x
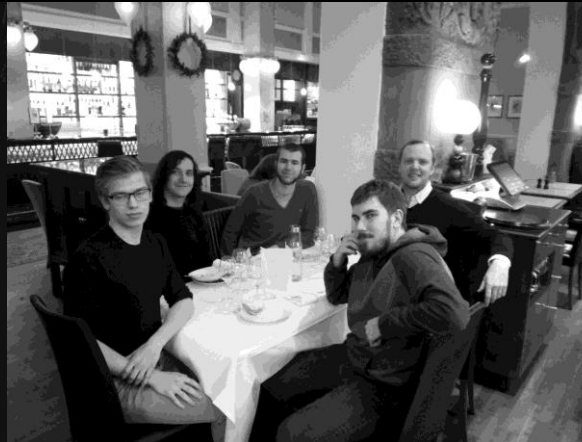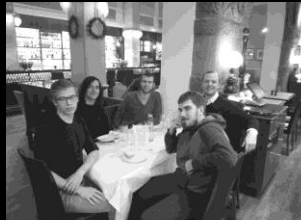
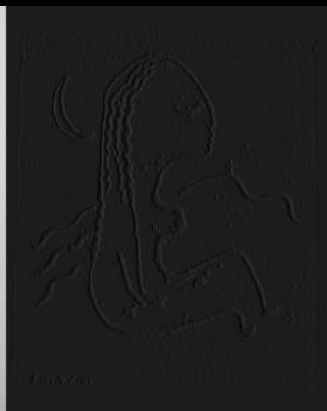Original picture
40.1 KB
Compressed
19 KB
Cutaway
12 KB
Reverse
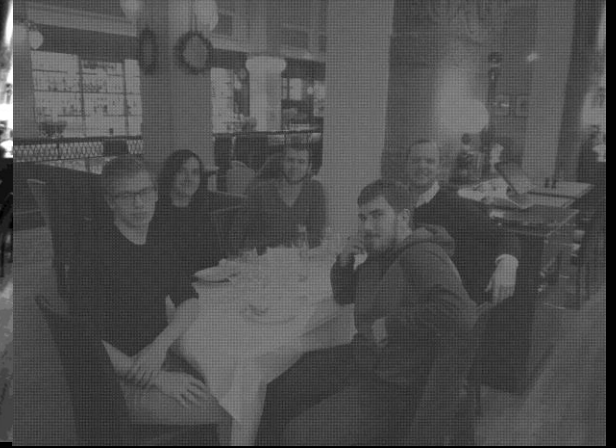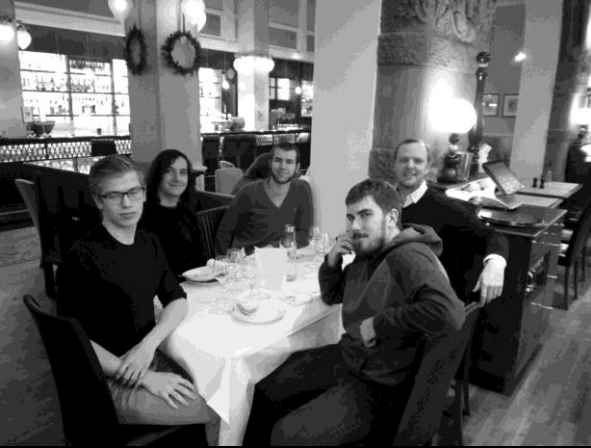37 KB

Group
764 KB
Compressed
356 KB
Cutaway
225 KB
Reverse
5.07 MB

Original picture
40.1 KB
Compressed 2x
6.95 KB
Cutaway
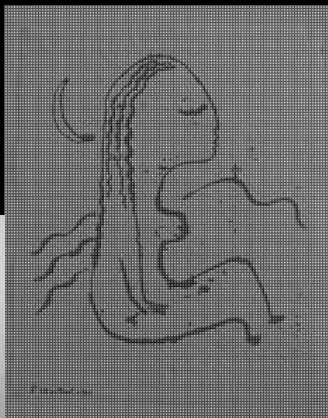3.98 KB
Reverse
30.9 KB

Group
764 KB
Compressed
122 KB
Cutaway
79.6 KB
Reverse
1.21 MB

Comp 3x

Compressed 3x
2.67 KB
Cutaway
1.47 KB
Reverse
8.12 KB

Group
Compressed
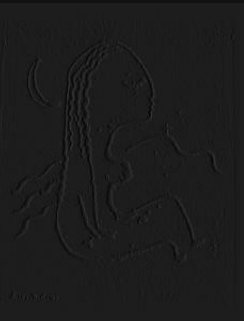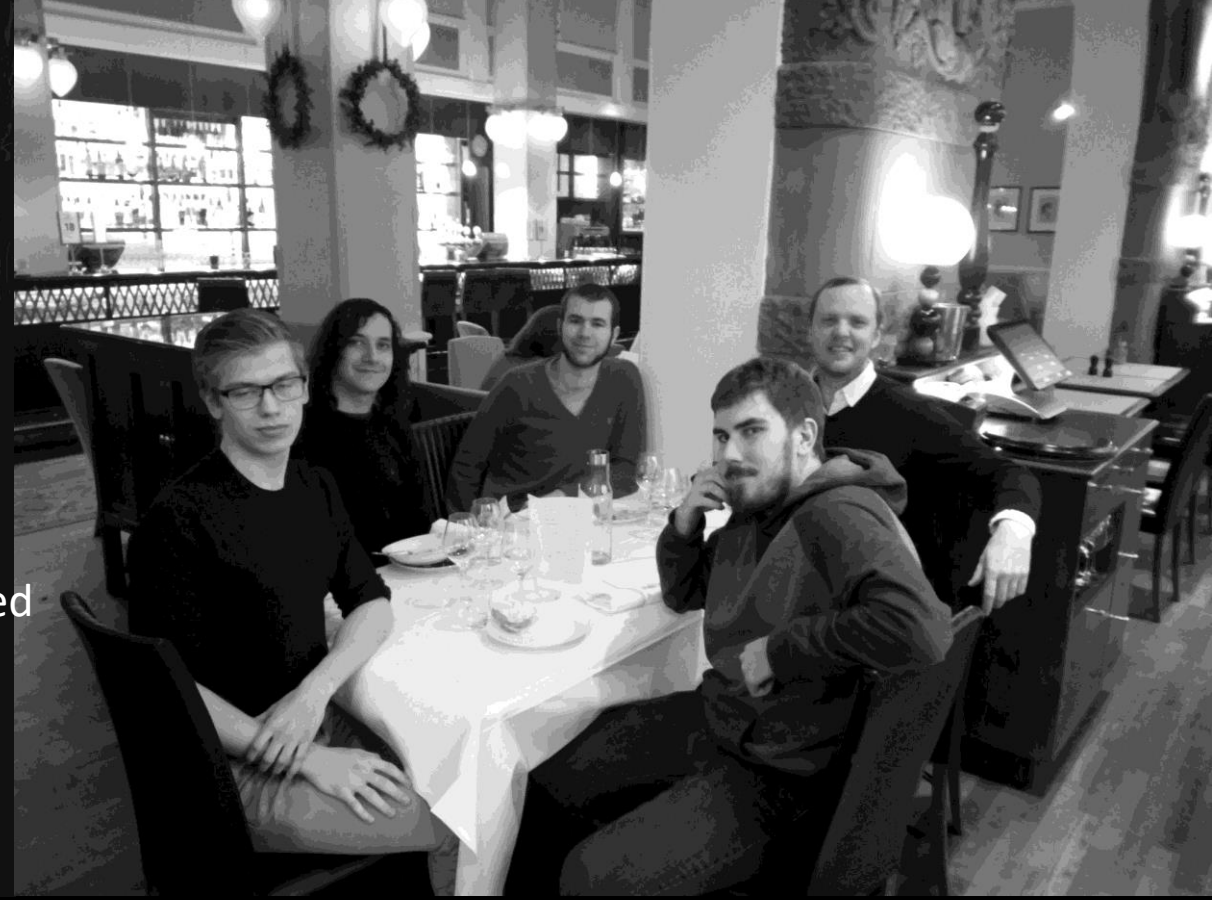45.6 KB
Cutaway
29 KB
Reverse
338 KB

Comp without matrix

Compressed 1x
19.2 KB
Cutaway
12 KB

Group
Compressed
359 KB
Cutaway
225 KB

Without 2x

Kvinna
Compressed
6.95 KB
Cutaway
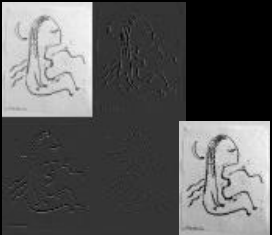3.98 KB

Group
Compressed
123 KB
Cutaway
79.4 KB

Without 3x

Kvinna
Compressed
2.43 KB
Cutaway
1.47 KB

Group
Compressed
45.9 KB
Cutaway
29.0 KB

Time

- Difference
- Matrix
- Without Matrix

Method

- Mostly in group
- Divided the work

Demonstration time!!!!!!!!!!!!!