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C:\Users\max\Downloads\sample.py - Notepad++
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Folder as Workspace
1 #!/usr/bin/env python3
2 #-*- coding: utf-8 -*-
3
4 import os
5 from amqr_mylibs import theqrcode
6 from PIL import Image
7
8 # Positional parameters
9 #
10 #
11 # Optional parameters
12 # version: int, from 1 to 40
13 # level: str, just one of ('L','M','Q','H')
14 # picture: str, a filename of a image
15 # colored: bool
16 # contrast: float
17 # brightness: float
18 # save_name: str, the output filename like 'example.png'
19 # save_dir: str, the output directory
20 #
21 # See [https://github.com/bushu/amazing-qr] for more details!
22 def __init__(words, version=1, level='H', picture=None, colored=False, contrast=1.0, brightness=1.0, save_name=None, save_dir=None):
23
24     supported_chars = r"0123456789ABCDEFHGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz .,:+*/\~!@#%&'<>[](){}|_`~"
25
26
27 # check every parameter
28 if not isinstance(words, str) or any(i not in supported_chars for i in words):
29     raise ValueError('Wrong words! Make sure the characters are supported!')
30 if not isinstance(version, int) or version not in range(1, 41):
31     raise ValueError('Wrong version! Please choose a int-type value from 1 to 40!')
32 if not isinstance(level, str) or len(level) != 1 or level not in 'LMQH':
33     raise ValueError('Wrong level! Please choose a str-type level from ('L','M','Q','H')!')
34 if picture:
35     if not isinstance(picture, str) or not os.path.isfile(picture) or picture[-4:] not in ('.jpg', '.png', '.bmp', '.gif'):
36         raise ValueError('Wrong picture! Input a filename that exists and be tailed with one of ('.jpg', '.png', '.bmp', '.gif')!')
37     if picture[-4:] == '.gif' and save_name and save_name[-4:] != '.gif':
38         raise ValueError('Wrong save name! If the picture is .gif format, the output filename should be .gif format!')
39 if not isinstance(colored, bool):
40     raise ValueError('Wrong colored! Input a bool-type value!')
41 if not isinstance(contrast, float):
42     raise ValueError('Wrong contrast! Input a float-type value!')
43 if not isinstance(brightness, float):
44     raise ValueError('Wrong brightness! Input a float-type value!')
45 if save_name and (not isinstance(save_name, str) or save_name[-4:] not in ('.jpg', '.png', '.bmp', '.gif')):
46     raise ValueError('Wrong save_name! Input a filename tailed with one of ('.jpg', '.png', '.bmp', '.gif')!')
47 if not os.path.isdir(save_dir):
48     raise ValueError('Wrong save_dir! Input a existing-directory!')
49
50
51 def combine(ver, qr_name, bg_name, colored, contrast, brightness, save_dir, save_name=None):
52     from amqr_mylibs.constant import alig_location
53     from PIL import ImageEnhance, ImageFilter
54
55     qr = Image.open(qr_name)
56     qr = qr.convert('RGBA') if colored else qr
57
58     bg0 = Image.open(bg_name).convert('RGBA')
59     bg0 = ImageEnhance.Contrast(bg0).enhance(contrast)
60     bg0 = ImageEnhance.Brightness(bg0).enhance(brightness)
61
62     if bg0.size[0] < bg0.size[1]:
63         bg0 = bg0.resize((qr.size[0]-24, (qr.size[0]-24)*int(bg0.size[1]/bg0.size[0])))
64     else:
65         bg0 = bg0.resize(((qr.size[1]-24)*int(bg0.size[0]/bg0.size[1]), qr.size[1]-24))
66     bg = bg0 if colored else bg0.convert('1')
67
68     aligs = []
69     if ver > 1:
70         aloc = alig_location[ver-2]
71         for a in range(len(aloc)):
72             for b in range(len(aloc)):
73                 if not ((a==b==0) or (a==len(aloc)-1 and b==0) or (a==0 and b==len(aloc)-1)):
74                     for i in range(3*(aloc[a]-2), 3*(aloc[a]+3)):
75                         for j in range(3*(aloc[b]-2), 3*(aloc[b]+3)):
76                             aligs.append((i,j))
77
78     for i in range(qr.size[0]-24):
79         for j in range(qr.size[1]-24):
80             if not ((i in (18,19,20) or j in (18,19,20) or (i<24 and j>qr.size[1]-49) or (i>qr.size[0]-24 and j<24))):
81                 qr.putpixel((i+12,j+12), bg.getpixel((i,j)))
82
83     qr_name = os.path.join(save_dir, os.path.splitext(os.path.basename(bg_name))[0] + '_qrcode.png') if not save_name else os.path.join(save_dir, qr_name)
84     qr.resize((qr.size[0]*3, qr.size[1]*3)).save(qr_name)
85
86
87 Python file length: 6 200 lines: 132 Ln: 8 Col: 24 Pos: 145 Unix (LF) UTF-8 INS 16:21 11.08.2022
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43
44     raise ValueError('Wrong brightness! Input a float-type value!')
45 if save_name and (not isinstance(save_name, str) or save_name[-4:] not in ('.jpg', '.png', '.bmp', '.gif')):
46     raise ValueError('Wrong save_name! Input a filename tailed with one of ('.jpg', '.png', '.bmp', '.gif')!')
47 if not os.path.isdir(save_dir):
48     raise ValueError('Wrong save_dir! Input a existing-directory!')
49
50
51 def combine(ver, qr_name, bg_name, colored, contrast, brightness, save_dir, save_name=None):
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53     from PIL import ImageEnhance, ImageFilter
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62     if bg0.size[0] < bg0.size[1]:
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64     else:
65         bg0 = bg0.resize(((qr.size[1]-24)*int(bg0.size[0]/bg0.size[1]), qr.size[1]-24))
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74                     for i in range(3*(aloc[a]-2), 3*(aloc[a]+3)):
75                         for j in range(3*(aloc[b]-2), 3*(aloc[b]+3)):
76                             aligs.append((i,j))
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78     for i in range(qr.size[0]-24):
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80             if not ((i in (18,19,20) or j in (18,19,20) or (i<24 and j>qr.size[1]-49) or (i>qr.size[0]-24 and j<24))):
81                 qr.putpixel((i+12,j+12), bg.getpixel((i,j)))
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83     qr_name = os.path.join(save_dir, os.path.splitext(os.path.basename(bg_name))[0] + '_qrcode.png') if not save_name else os.path.join(save_dir, qr_name)
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85 qr.resize((qr.size[0]*3, qr.size[1]*3)).save(qr_name)
86 return qr_name
87
88 tempdir = os.path.join(os.path.expanduser('~'), '.myqr')
89
90 try:
91     if not os.path.exists(tempdir):
92         os.makedirs(tempdir)
93
94     ver, qr_name = theqrcode.get_qrcode(version, level, words, tempdir)
95
96     if picture and picture[-4]!='.gif':
97         import imageio
98
99         im = Image.open(picture)
100         duration = im.info.get('duration', 0)
101         im.save(os.path.join(tempdir, '0.png'))
102         while True:
103             try:
104                 seq = im.tell()
105                 im.seek(seq + 1)
106                 im.save(os.path.join(tempdir, '%s.png' % (seq+1)))
107             except EOFError:
108                 break
109
110             imsname = []
111             for s in range(seq+1):
112                 bg_name = os.path.join(tempdir, '%s.png' % s)
113                 imsname.append(combine(ver, qr_name, colored, contrast, brightness, tempdir))
114
115             ims = [imageio.imread(pic) for pic in imsname]
116             qr_name = os.path.join(save_dir, os.path.splitext(os.path.basename(picture))[0] + '_qrcode.gif') if not s
117             imageio.mimwrite(qr_name, ims, '.gif', **{'duration': duration/1000})
118         elif picture:
119             qr_name = combine(ver, qr_name, picture, colored, contrast, brightness, save_dir, save_name)
120         elif qr_name:
121             qr = Image.open(qr_name)
122             qr_name = os.path.join(save_dir, os.path.basename(qr_name)) if not save_name else os.path.join(save_dir,
123             qr.resize((qr.size[0]*3, qr.size[1]*3)).save(qr_name)
124
125     return ver, level, qr_name
126
127 except:
128
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115         ims = [imageio.imread(pic) for pic in imsname]
116         qr_name = os.path.join(save_dir, os.path.splitext(os.path.basename(picture))[0] + '_qrcode.gif') if not s
117         imageio.mimwrite(qr_name, ims, '.gif', **{'duration': duration/1000})
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119         qr_name = combine(ver, qr_name, picture, colored, contrast, brightness, save_dir, save_name)
120     elif qr_name:
121         qr = Image.open(qr_name)
122         qr_name = os.path.join(save_dir, os.path.basename(qr_name)) if not save_name else os.path.join(save_dir,
123         qr.resize((qr.size[0]*3, qr.size[1]*3)).save(qr_name)
124
125     return ver, level, qr_name
126
127 except:
128     raise
129 finally:
130     import shutil
131     if os.path.exists(tempdir):
132         shutil.rmtree(tempdir)
133
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