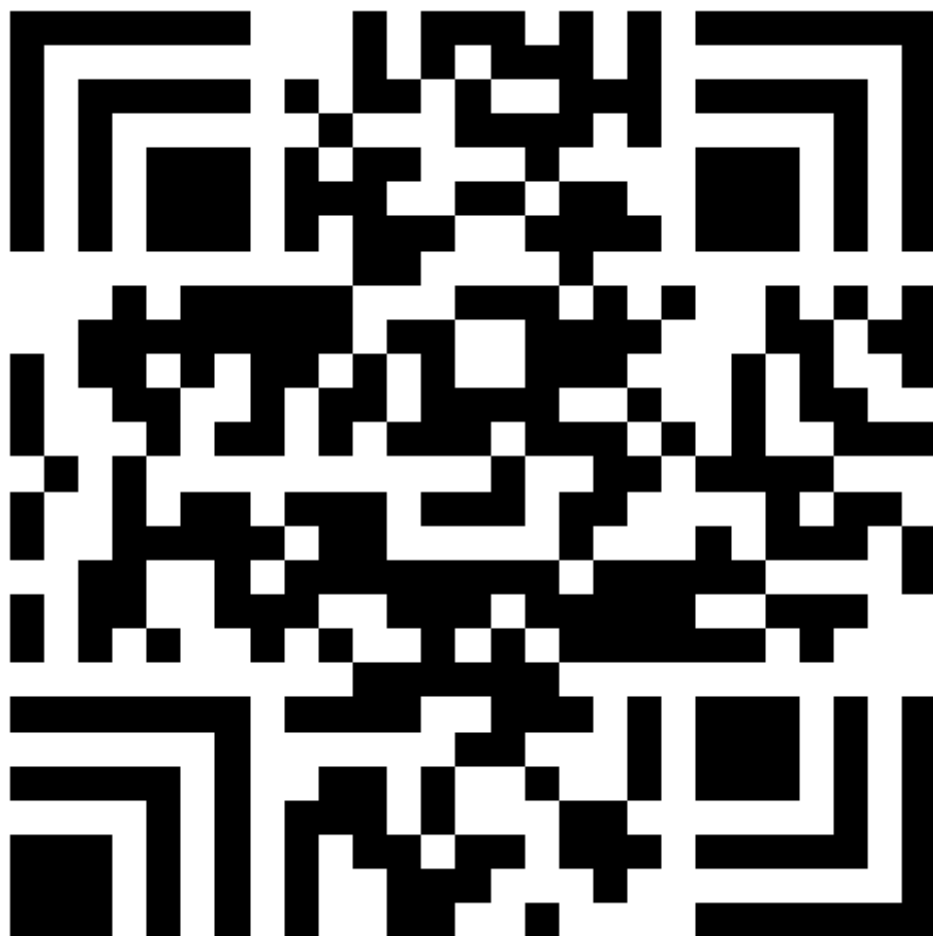# 韩信点兵wp

下载附件之后，发现字符个数为 250000 个，而且发现字符中只含有0和1，猜测是将二维码的黑白像素点转化为0和1得到的数据，使用脚本复原

```python
from PIL import Image
MAX = 500
pic = Image.new("RGB",(MAX, MAX))
with open("./hanxin.txt","r") as flag:
    str = flag.read()
i=0
for y in range (0,MAX):
    for x in range (0,MAX):
        if(str[i] == '1'):
            pic.putpixel([x,y],(255, 255, 255))
        else:
            pic.putpixel([x,y],(0,0,0))
        i = i+1
pic.show()
pic.save("flag.png")
```

转化之后发现转来的码如下，并不是经典的二维码：

结合名字韩信的谐音和四个角的明显特征容易联想到我国开发的汉信码

flag: flag{H@n_x!n_mEssage}

ps：出题脚本

```python
from PIL import Image
import numpy as np
import matplotlib.pyplot as plt
img=np.asarray(Image.open('./hx.png')) #打开图像并转化为数字矩阵
str = ""
black = [255,255,255,255]
write = [0,0,0,0]
for j in img:
    for i in j:
        if i[0] == 255:
            str+="1"
        if i[0] == 0:
            str+="0"
f = open("hanxin.txt","w")
f.write(str)
f.close
print (str)
```

```
plt.imshow(img)
```