|  |
| --- |
| 运行截图：  **正规化之前：**    **正规化之后** |
| **代码：**  import matplotlib  from matplotlib import cm  import matplotlib.pyplot as plt  import numpy as np  matplotlib.use('TkAgg')  image = [[70,80,83,70],  [74,89,70,69],  [72,92,81,80],  [70,92,88,76]]  normalised = [[70,80,83,70],  [74,89,70,69],  [72,92,81,80],  [70,92,88,76]]  # image为正规化之前的图像，normalised为正规化之后的图像  # 获取数组行和列  rows=np.size(image,0)  cols=np.size(image,1)  # 获取原图像的最大像素值和最小像素值  minim=255  maximum=-1  for x in list(range(cols)):  for y in list(range(rows)):  if minim > image[x][y]:  minim = image[x][y]  if maximum < image[x][y]:  maximum = image[x][y]  # 计算原图像像素值的差  oldRange = maximum - minim;  # 根据正规化公式进行正规化  for X in list(range(cols)):  #%address a11 columns  for y in list(range(rows)):  #%address all rows  normalised[y][X] = (int)((image[y][X]-minim)\*255/oldRange)  # 输出图像  x, y = np.mgrid[0:4:1, 0:4:1]  z = np.array(normalised)  s = np.array(image)  fig = plt.figure(figsize=(8, 6))  ax = plt.axes(projection="3d")  ax.plot\_surface(x, y, z, cmap=cm.ocean)  # 设置Z轴范围  # ax.set\_zlim(0, 100)  # ax.plot\_surface(x, y, s, cmap=cm.ocean)  plt.show() |