Juan Carlos GES 41

```python
import matplotlib.pyplot as plt
import numpy as np
from PIL import Image

img = Image.open('cores.jpg')
img_rgb = np.array(img)
print(img_rgb.shape)
l, c, p = img_rgb.shape

img_hsv = np.zeros(shape=img_rgb.shape, dtype=np.float64)

for i in range(l):
    for j in range(c):

        R = img_rgb[i, j, 0] / 255
        G = img_rgb[i, j, 1] / 255
        B = img_rgb[i, j, 2] / 255

        Cmax = max(R, G, B)
        Cmin = min(R, G, B)
        delta = Cmax - Cmin

        if delta == 0:
            H = 0
        elif Cmax == R and G >= B:
            H = (60 * ((G-B)/delta))
        elif Cmax == R and G < B:
            H = (60 * ((G-B)/delta)) + 360
        elif Cmax == G:
            H = (60 * ((B-R)/delta)) + 120
        elif Cmax == B:
            H = (60 * ((R-G)/delta)) + 240

        if delta == 0 or Cmax == 0:
            S = 0
        else:
            S = delta / Cmax

        V = Cmax

        img_hsv[i, j, 0] = H / 360
        img_hsv[i, j, 1] = S
        img_hsv[i, j, 2] = V


plt.figure(figsize=(8,8))
plt.subplot(2, 1, 1)
plt.imshow(img_rgb)
plt.subplot(2, 1, 2)
plt.imshow(img_hsv)
```

```python
                 img_hsv[i, j, 0] = H / 360
                 img_hsv[i, j, 1] = S
                 img_hsv[i, j, 2] = V


         plt.figure(figsize=(8,8))
         plt.subplot(2, 1, 1)
         plt.imshow(img_rgb)
         plt.subplot(2, 1, 2)
         plt.imshow(img_hsv)
```

(600, 800, 3)

Out[27]: <matplotlib.image.AxesImage at 0x23aedd2d400>