

Backend Developer Hiring Assignment

This assignment involves creating a web interface that allows users to upload an image of their [urine strip](#) (see below) and identify the colors on the strip (see strip images below). Each strip will have 10 colors. You will have to analyze the image (hint: use open CV) and return the results as a json with 10 colors (RGB values).

Your submission will be evaluated based on

1. Web App specifications
 - a. The image should be entered through API.
 - b. Web interface can be in vanilla JS or any frontend or native framework.
 - c. Any backend framework is allowed. Preferably Django.
2. Your adherence to best coding practices such as naming conventions, modularity, and use of Git.
3. Image processing can be a complex task. We won't mind if you copy the code, as long as it works. Also we don't expect best results. Just functional code.

To submit your assignment, you will need to create a GitHub repository containing your code and any relevant documentation.

Please find images here if you need good quality images to test;

https://drive.google.com/file/d/1QKZfWqx3sLGz4qos8C44igmN0rjecdH1/view?usp=share_link

Image



Response:

```
{'URO': [206, 193, 187],  
'BIL': [202, 185, 164],  
'KET': [193, 171, 153],  
'BLD': [204, 159, 54],  
'PRO': [191, 172, 130],  
'NIT': [203, 189, 170],  
'LEU': [194, 175, 164],  
'GLU': [128, 173, 163],  
'SG': [191, 159, 76],  
'PH': [206, 152, 106]}
```

Note: Array returned in response is the RGB value of each box from top to down.



Response:

```
{'URO': [186, 171, 149],  
'BIL': [192, 179, 156],  
'KET': [180, 167, 141],  
'BLD': [155, 127, 75],  
'PRO': [170, 155, 99],  
'NIT': [183, 172, 156],  
'LEU': [167, 161, 145],  
'GLU': [134, 160, 148],  
'SG': [70, 94, 92],  
'PH': [175, 152, 118]}
```



Response:

```
{'URO': [198, 187, 181],  
'BIL': [197, 180, 165],  
'KET': [205, 189, 173],  
'BLD': [176, 158, 146],  
'PRO': [182, 151, 99],  
'NIT': [161, 158, 120],  
'LEU': [185, 163, 142],  
'GLU': [174, 159, 142],  
'SG': [160, 162, 131],  
'PH': [171, 165, 130]}
```



Response:

{'URO': [183, 172, 152],
'BIL': [196, 188, 165],
'KET': [174, 165, 148],
'BLD': [178, 158, 112],
'PRO': [158, 161, 128],
'NIT': [188, 172, 149],
'LEU': [172, 164, 144],
'GLU': [158, 163, 133],
'SG': [175, 174, 140],
'PH': [169, 154, 117]}



Response:

```
{'URO': [183, 172, 152],  
'BIL': [196, 188, 165],  
'KET': [174, 165, 148],  
'BLD': [178, 158, 112],  
'PRO': [158, 161, 128],  
'NIT': [188, 172, 149],  
'LEU': [172, 164, 144],  
'GLU': [158, 163, 133],  
'SG': [175, 174, 140],  
'PH': [169, 154, 117]}
```