Python developer test

# Find geo location.

In this test you are asked to create a full Http python service.

The service will implement the following requests:

1. Load images: get a list of images metadata (see the bellow example) and store them for further queries
2. load polygons: get a list of polygons metadata (see the bellow example) and store them for further queries.
3. get\_polygon(image\_name):  
   return the polygon metadata like Id,Index,Farm ID and etc the given image names included in
4. get\_images(polygon\_name == Index):  
   return the list of the images included in this polygon  
   \* Index is the polygon name.
5. get\_all\_polygons():  
   return the names (Index) of all polygons such that at least one image is contained in them

Please note that only after 1 and 2 the services can return real data, but we can call step 3-5 even before calling step 1,2 please pay attention.

Images metadata CSV example

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ImageName | latitude | longitude | Z(High) | yaw | pitch | roll |
| 1\_DSC08059.JPG | -21.9397329 | -48.5117607 | 660.41 | 151.19 | -10.98 | -1.93 |
| 1\_DSC08060.JPG | -21.939874 | -48.5116831 | 660.91 | 151.82 | -9.95 | -2.35 |
| 1\_DSC08061.JPG | -21.940018 | -48.5116031 | 662.31 | 152.35 | -10.89 | -4.06 |
| 1\_DSC08062.JPG | -21.9401599 | -48.5115223 | 662.93 | 152.34 | -11.27 | -3.56 |
| 1\_DSC08063.JPG | -21.9402976 | -48.511445 | 663.47 | 152.79 | -11.63 | -4.01 |
| 1\_DSC08064.JPG | -21.9404402 | -48.5113676 | 663.99 | 153.41 | -11.97 | -5.49 |
| 1\_DSC08065.JPG | -21.9405863 | -48.5112891 | 664.56 | 152.63 | -13.08 | -5.97 |
| 1\_DSC08066.JPG | -21.9407355 | -48.5112052 | 665.13 | 152.58 | -12.45 | -5.76 |
| 1\_DSC08067.JPG | -21.9408712 | -48.5111296 | 665.74 | 153.1 | -13.69 | -6.06 |
| 1\_DSC08068.JPG | -21.9410077 | -48.5110509 | 666.46 | 152.87 | -13.42 | -5.5 |
| 1\_DSC08069.JPG | -21.9411453 | -48.5109704 | 667.04 | 152.99 | -13.49 | -4.72 |
| 1\_DSC08070.JPG | -21.9412829 | -48.5108917 | 667.83 | 153.1 | -13.97 | -4.82 |

Polygons metadata geojson example:

A screen shot of a computer

Description automatically generated

In order to visual see this you can use Vscode and install Geo Map viewer plugin.

The meta data in the Polygon.json looks the following:

A screenshot of a cell phone

Description automatically generated

Polygon points in lat/long

Link to the files is [here](https://drive.google.com/drive/folders/1Usc23xBmBZWnJ5UDbWGdN6xqj_xjiZJi?usp=sharing)