

Task 1

```
path = "Mini_BAGLS_dataset"
seg_ima_paths = glob.glob(f"{path}/*seg.png")
images_paths = [im_path for im_path in glob.glob(f"{path}/*.png") if im_path not in seg_ima_paths]

random.seed(5)
images_dict = defaultdict(dict)
selected_images_paths = random.sample(images_paths, 4)
for img_path in selected_images_paths:
    path_without_extension = img_path.split(".")[0]
    file_name = path_without_extension.split("/")[1]
    images_dict[file_name]['image'] = (io.imread(img_path))
    with open(f"{path_without_extension}.meta", 'r') as file:
        images_dict[file_name]['meta'] = (json.load(file))
    images_dict[file_name]['seg_image'] = (io.imread(f"{path_without_extension}_seg.png"))
```

Task 4

The the luminosity method :

because it has a better apparent brightness since it accounts for human perception by favoring the green channel

Task 3

Task 2

