

## *image\_analysis\_tutorial*

### ● Prerequisite Modules

- numpy  
→ pip install numpy
- matplotlib  
→ pip install matplotlib
- PIL  
→ pip install PIL
- tqdm  
→ pip install tqdm
- scipy  
→ pip install scipy
- os and sys are automatically included so need to worry about it

- **Running the script**

- Once finished installing necessary prereq modules, all you need to do is provide the file path of the image you wish to analyze
  - no need to encapsulate in quotation marks
- Run: "python3 (or python depending what you have) image\_analysis.py [file path]" in your terminal without the quotation marks

### How it should look like when run successfully

```
honestkids@vic1623:~/assignments/mad2502_final_project$ python3 main.py marston.jpg  
Found marston.jpg!  
Image basic information: None, (4032, 3024)  
  
Calculating DCT coefficients: 100%|██████████████████████████████████████| 378/378 [00:02<  
00:00, 141.78it/s]  
  
Retrieving Significant Figures: 100%|██████████████████████████████████████| 12192768/12192768 [00:15<00:  
00, 781792.25it/s]  
  
Calculating Distributions: 100%|██████████████████████████████████████| 9/9 [00:10  
<00:00, 1.12s/it]  
  
QStandardPaths: wrong permissions on runtime directory /run/user/1000/, 0755 instead of 0700  
Histogram completed. Plot saved.  
  
Statistical analysis completed. Text file saved.  
  
Colorcoding the original image: 100%|██████████████████████████████████████| 3024/3024 [00:03<  
00:00, 859.11it/s]  
  
Generating colorcoded image...  
Image saved!  
  
All done! You can check results in the Results directory.
```