

Computer Vision Problem Statement

Title: Calculating the Mean Pixel Intensity of an Image with Python

Submission Link: <https://forms.gle/rsuSotqy9aeHSTu18>

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Problem Statement

Write a Python program that:

- Loads a digital image from your computer.
- Converts the image to grayscale.
- Calculates and prints the mean (average) pixel intensity of the grayscale image.

This task helps you understand how to extract a basic numerical parameter from images. Follow the resources, AI use only for resources, all codes generated from AI will be rejected (we will know).

Resources and Setup

- **Install Visual Studio Code (VSCode):**
<https://code.visualstudio.com/download>
- **Install Python:**
<https://www.python.org>
- **Learn How to Install Python Packages:**
<https://www.geeksforgeeks.org/python/python-pip/>
- **Basic Python Tutorial:**
<https://www.geeksforgeeks.org/python/how-to-learn-python-from-scratch/>
- **Read and Process Images in Python:**
<https://www.geeksforgeeks.org/python/python-pillow-tutorial/>
- **Introduction to Computer Vision**
<https://opencv.org/blog/what-is-computer-vision/>

Step-by-Step Implementation Guide

1. Install Python and VSCode on your system using the links above.
2. Open VSCode and set up a new Python project.
3. Install the necessary libraries for image processing by running `pip install` in your terminal.

4. Write your code.
5. Run your script on sample images and observe the output.

Submission Instructions

- Submit your code and results here : <https://forms.gle/rsuSotqy9aeHSTu18>
- For help or clarifications, contact the POC listed above (message in the group first for doubts, dm only if necessary, no calls)
- Ensure your name, roll number, and contact information are included at the top of your code file in comments.