



# Innovative Teaching Method

**Course Name with code:** Machine Learning      **SEM:**VII

**Activity:** Count the number of Objects using OpenCV in Python

**Course Coordinator:** Prof. Shridhar Desai

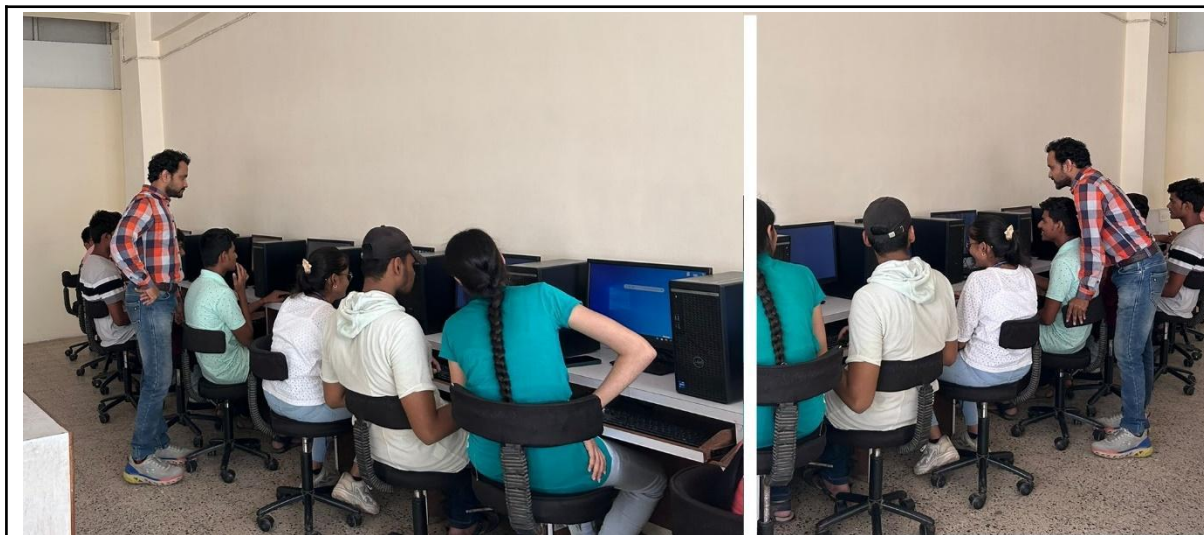
**Date:** 17.08.2022

## Report on Count Number of Objects using OpenCV in Python

Counting objects in an image is a task of computer vision. There are many computer vision libraries that you can use for this task, such as OpenCV, TensorFlow, PyTorch, Scikit-image, and cvlib. You must have not heard much about the cvlib library in Python. Well, this is a very simple, high level, and easy to use computer vision library in Python.

We tried out any random image and check out how many different objects are present in the image. In this session we use of the cvlib library which is very simple, easy, and a high-level library in Python. If you don't have the library installed yet, do the same by using the pip command.

To load an image, we will be making use of the imread function of the OpenCV library and pass the name of the image as a parameter. Make sure the image is in the same directory as the code file.



Module needed

- **OpenCv**: OpenCv is an open-source library that is useful for computer vision applications such as image processing, video processing, facial recognition, and detection, etc.



- **Numpy**: Numpy is a python package for scientific computing. It is a popular math library for Machine Learning. The main Object of Numpy is a multidimensional array.
- **Matplotlib**: Matplotlib is a Python library used for data visualization and graphical plotting of the data.

**Outcomes of Count the number of Objects using OpenCV in Python:**

- 1.Improves mental functions.
- 2.Memory and thinking skills may improve with practice in Machine Learning.

<b>(PO, PSO) Mapping</b>				
<b>Topic of Innovative Teaching Method</b>	<b>PO</b>	<b>Mapping Level</b>	<b>PSO</b>	<b>Mapping Level</b>
<b>Count Number of Objects using OpenCV in Python</b>	<b>PO6: The engineer and society</b>	<b>2</b>	<b>PSO1 and PSO2</b>	<b>2</b>
	<b>PO9: Individual and team work</b>	<b>3</b>		
	<b>PO10: Communication</b>	<b>2</b>		
	<b>PO12: Life-long learning</b>	<b>2</b>		