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**Section:** BSAI-4A

**Subject:** PROGRAMMING FOR ARTIFICIAL INTELLIGENCE(LAB)

**TASK NO:** TASK # 6

**What this program does:**

This program uses YOLOv8(a smart AI model) to find animals in a picture. It shows red boxes around the animals and tells how many animals are in the image.

**Tools Used:**

* YOLOv8: A pre-trained AI model for object detection.
* OpenCV(cv2): Used to read images, draw boxes, and shows the result.

**How the program works:**

1. It loads the YOLOv8 model (yolov8n.pt)
2. It defines animal IDs (cat, dog, cow, horses, elephant, zebra, giraffe, etc).
3. You give it an image path.
4. The program checks the image and finds animals.
5. It shows the total number of animals in green text at the top.
6. It draws red rectangles around animals.
7. The image is displayed in a window.

**Where it can be used:**

* Counting animals in a picture.
* Wildlife research
* Farm animal monitoring.
* Security cameras that detect animals.