

Design and train a model for objects detection with real time example

1. Install Required Package

- Installs the `ultralytics` package which provides easy access to YOLOv8 models for object detection.

2. Import Libraries

- Imports:
 - `YOLO` from `ultralytics` to load and use the YOLOv8 model.
 - `cv2` (OpenCV) for reading images.
 - `matplotlib.pyplot` for displaying annotated images.

3. Load Pre-trained YOLOv8 Model

- Loads the YOLOv8-nano (`yolov8n.pt`) model, which is a lightweight and fast version suitable for real-time applications.

4. Detect Objects in Image 1

- Reads an image (e.g., of a car) using OpenCV.
- Feeds the image into the YOLO model for object detection.
- Annotates the image with detected objects (bounding boxes and labels).
- Displays the annotated image using Matplotlib.

5. Detect Objects in Image 2

- Repeats the same process on a second image (a different scene, e.g., a street or landscape).
- Detects and visualizes objects present in the image.

