26/10/25
Ex: 15.

18. Implement a YOLO Model for Object Detection

Aim:-

To implement and test a YOLO object detection model to locate and classify objects in images

Objective:-

1. To understand real time object detection
2. To perform bounding box regression and classification
3. To evaluate detection speed and accuracy

Pseudocode:-

1. Start
2. load YOLO model weights and configuration
3. Load input image or video
4. Preprocess image (resize, normalize)
5. Perform forward pass to obtain bounding boxes and class probabilities

6. Apply Non-max suppression to remove duplicate boxes

7. Draw bounding boxes and labels on image

8. Display output

END

Observation:

1. YOLO provided fast real-time detection with good accuracy

2. Larger objects were detected more reliably than very small objects.

3. Bounding Box overlap was reduced using Non-Max Suppression

Result:

YOLO model successfully detected and localize objects in images demonstrating high speed object recognition capability.