**Aim: Object detection and Recognition on available online image datasets using the YOLO Model.**

% Load the pre-trained YOLO model and configure it (using TensorFlow)

net = importKerasNetwork('yolov3.h5'); % Replace with the path to your model

inputSize = [416 416 3]; % Input size expected by the model

% Load and preprocess the image dataset

imageFolder = 'path\_to\_dataset\_folder'; % Replace with your dataset folder

imageFiles = dir(fullfile(imageFolder, '\*.jpg')); % Assuming JPEG images

numImages = length(imageFiles);

for i = 1:numImages

% Load and preprocess each image

img = imread(fullfile(imageFolder, imageFiles(i).name));

img = imresize(img, inputSize(1:2));

img = img/255; % Normalize pixel values (if needed)

% Perform object detection

detections = detectYOLO(net, img);

% Visualize and process detections (e.g., filter by confidence score)

% Display detected objects with bounding boxes and labels

imshow(img);

hold on;

for j = 1:numel(detections)

bbox = detections(j).Location;

label = detections(j).Label;

score = detections(j).Confidence;

if score > 0.5 % Adjust confidence threshold as needed

rectangle('Position', bbox, 'EdgeColor', 'r', 'LineWidth', 2);

text(bbox(1), bbox(2) - 10, label, 'Color', 'r', 'FontSize', 12);

end

end

hold off;

% Further processing or recognition for detected objects can be done here

end