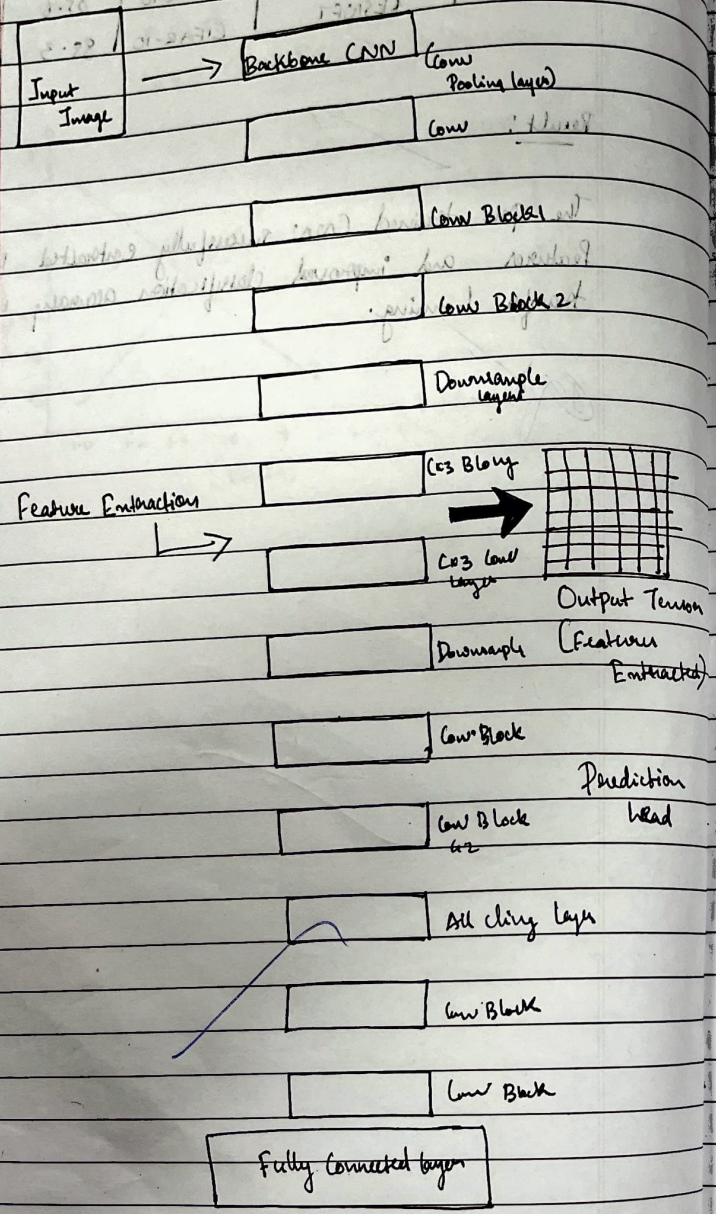
YOLO Model Architecture Diagram



27-10-25

Implement a YOLO Model to Detect Objects

En:15

Aim:

To implement a YOLO (You Only Look Once) model for real-time object detection in images or video streams

Objectives:

1. To Load a pre-trained YOLO model for object detection
2. To process input images and identify objects with bounding boxes.
3. To evaluate the model's detection accuracy and speed.

Pseudocode:

1. Import required libraries.
2. Load the YOLO pre-trained weights and configuration files.
3. Read and pre-process the input image or video frame
4. Pass the frame through the YOLO network to get predictions.
5. Draw bounding boxes and labels for the detected objects.

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Observation Table:

Epochs	Input image	Object Detected	Confidence	Processing time
1	street.jpg	Car, person	94.89	0.12
2	park.jpg	dog, bench	91.87	0.15

Observation:

1. YOLO provides real time object detection with high accuracy.
2. Detection confidence varies with object size and lighting.
3. Smaller objects are harder to detect compared to larger ones.

Result:

The YOLO model successfully detected and classified multiple objects in images with high accuracy and real time performance.