1. What do REGION PROPOSALS entail?

Region proposals, in the context of object detection and image analysis, refer to the process of generating potential bounding boxes or regions in an image that are likely to contain objects of interest. These proposals serve as candidate regions for further analysis and classification by object detection algorithms.

1. What do you mean by NON-MAXIMUM SUPPRESSION? (NMS)

Non-Maximum Suppression (NMS) is a technique commonly used in object detection and computer vision tasks to eliminate redundant and overlapping bounding box predictions. Its purpose is to select the most relevant and accurate bounding boxes while suppressing redundant detections.

1. What exactly is mAP?

mAP stands for mean Average Precision, and it is a commonly used evaluation metric in object detection and image classification tasks. It provides a comprehensive measure of the performance of an object detection algorithm or model.

1. What is a frames per second (FPS)?

Frames per second (FPS) is a unit of measurement that indicates the number of frames (individual images) displayed or processed per second in a video or animation sequence. It is a measure of the temporal resolution or smoothness of a video.

1. What is an IOU (INTERSECTION OVER UNION)?

IOU stands for Intersection over Union, which is a commonly used evaluation metric in object detection and image segmentation tasks. It measures the overlap or similarity between the predicted bounding box or segmentation mask and the ground truth annotation.

1. Describe the PRECISION-RECALL CURVE (PR CURVE)

The Precision-Recall (PR) curve is a graphical representation of the trade-off between precision and recall for a classification or detection model. It is commonly used to evaluate the performance of models in tasks where class imbalance is present or when the focus is on retrieving relevant instances rather than classifying all instances.

1. What is the term "selective search"?

Selective Search is a popular algorithmic approach for generating region proposals in computer vision tasks, particularly in object detection. It aims to identify potential object regions in an image by grouping similar regions together based on low-level visual features.

1. Describe the R-CNN model's four components.

The R-CNN (Region-based Convolutional Neural Network) model is a pioneering object detection framework that introduced the concept of region proposals and convolutional neural networks (CNNs) for object detection. The R-CNN model consists of four main components:

Region Proposal

Region of Interest (ROI) Pooling:

1. What exactly is the Localization Module?

The Localization Module, also known as the bounding box regression module, is a component within object detection models that aims to refine the predicted bounding box coordinates for more accurate localization of objects within an image. It is typically present in models like R-CNN, Fast R-CNN, and Faster R-CNN

1. What are the R-CNN DISADVANTAGES?

R-CNN (Region-based Convolutional Neural Network) introduced significant advancements in object detection

The R-CNN model has paved the way for more efficient and accurate object detection models like Fast R-CNN, Faster R-CNN, and subsequent architectures that address some of these limitations. These newer models build upon the concepts introduced by R-CNN while incorporating improvements in terms of speed, memory usage, and spatial alignment.