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## ANN in automated vehicle detection

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Abstract - Literature review revealed that vehicle tracking is a challenging task in spite of all sophisticated methods that have been developed. The major challenge is to keep track of the available of a particular choice. The performance of many object detection applications has received an importance. A method that discriminates vehicle from the background image is done through image processing. The detection and tracking system should be able to detect and track various objects in the environment, and obtain the object image information such as the relative speed, velocity, and acceleration. Several approaches have been applied to automatic object detection and +tracking problems. The term object detection here refers to the detection of small objects in large images .This includes both object classification and object localization. Object classification refers to the task of discriminating between images of different kinds of object, Where each image contains only one of the objects of interest. Object localization refers to the task of identifying the positions of all objects of interest in a large image. Most research on object detection involves stages : preprocessing, segmentation, feature extraction, and classification . The reprocessing stage aims to remove noise or enhance edges. In the segmentation stage, a number of coherent regions and suspicious regions, which might contain objects, are usually located and separated from the entire images. The feature extraction stage extracts domain - specific features from the segmented regions . The classification stage uses these features to distinguish the classes of objects of interest using ANN.