Object Detection and Localization

Abstract

Object detection is the technology that is used in images or a scene.It actually detects whether an object is present or not in the scene.After detection, the next process is Localization.Localization is the process of finding where the detected object in the image or a scene.In traditional methods of object detection and localization, it was very complex to compare the actual object and the detected object due to some limitations such as large variations in the viewpoints,poses,occlusions and lighting conditions. With the development of deep learning, we can solve this problems and we can increase the efficiency of the system.While comparing with traditional approach and deep learning approach, In traditional method there is three step process:Selection of information region,extracting the features from the selected region and the classifying the object with the features derived. So there should be a domain expert to identify the applied features so that it will reduce the complexity of the data and makes patterns more visible to the algorithm.But in deep learning there is no need for a domain expert, it has a deep architecture for learning the high level features from the data one by one without extracting the features manually.