**Selective Search Algorithm**

* Selective search is a region proposal algorithm used in object detection.
* It is designed to be fast with a very high recall.
* It is based on computing hierarchical grouping of similar regions based on color, texture, size and shape compatibility.

**Object Detection and Object Recognition:**

* **Object recognition** is an algorithm in which we identify which object is present in the image.
* It takes an entire image as an input and outputs class labels and class probabilities of the objects present in an image.
* **Object Detection** is an algorithm in which we not only identify the object but also we localize the object by drawing a bounding box around that object present in the image.
* It takes an entire image as input and outputs the object classes along with bounding boxes around the object.
* To localize an object, we have to select sub regions or patches of the image and then we must apply an object recognition algorithm to these sub regions.
* The location of the objects is given by these image patches where the class probability returned by the object recognition algorithm is high.
* The most straightforward way to generate smaller sub-regions (patches) is called the Sliding Window approach. However, the sliding window approach has several limitations. These limitations are overcome by a class of algorithms called the “Region Proposal” algorithms. Selective Search is one of the most popular Region Proposal algorithms.