

## Recognition and Counting Algorithm for Sub-Regional Objects in a Handwritten Image through Image Sets

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**Abstract :** In this paper, a novel algorithm is proposed for the recognition of hulls in a hand written images that might be irregular or digit or character shape. Identification of objects and internal objects is quite difficult to extract, when the structure of the image is having bulk of clusters. The estimation results are easily obtained while going through identifying the sub-regional objects by using the SASK algorithm. Focusing mainly to recognize the number of internal objects exist in a given image, so as it is shadow-free and error-free. The hard clustering and density clustering process of obtained image rough set is used to recognize the differentiated internal objects, if any. In order to find out the internal hull regions it involves three steps pre-processing, Boundary Extraction and finally, apply the Hull Detection system. By detecting the sub-regional hulls it can increase the machine learning capability in detection of characters and it can also be extend in order to get the hull recognition even in irregular shape objects like wise black holes in the space exploration with their intensities. Layered hulls are those having the structured layers inside while it is useful in the Military Services and Traffic to identify the number of vehicles or persons. This proposed SASK algorithm is helpful in making of that kind of identifying the regions and can useful in undergo for the decision process (to clear the traffic, to identify the number of persons in the opponent's in the war).

**Keywords :** chain code, Hull regions, Hough transform, Hull recognition, Layered Outline Extraction, SASK algorithm

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