# Color Edge Enhancement Based Fuzzy Segmentation Of License Plates

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## Summary

The area of automatic license plate recognition (ALPR) offers a big scope in numerous applications and a lot of techniques have been proposed. Most of the techniques work under restricted and supervised conditions. The proposed ALPR technique consists of two main modules: plate locating module and plate segmentation module. In the initial stage, search is being made for a prospective license plate on the basis of some of the local features contained in its fuzzy geometry. The second module utilizes a fuzzy C means based clustering over the finalized plate-patch to cluster the eight-connected components in it into desired and undesired regions. Segmentation proceeds only over the cluster containing the desired plate regions. In the experiment on locating license plates, 852 images were taken at various backgrounds and conditions. Of these, 10 images failed to locate the license plates; the rate of success was 98.82%. Experiments for character segmentation were carried out on the remaining 842 plates. Of which, 39 plates were not properly segmented; the success rate was 95.36%. The combined rate for the two phases of our license plate identification algorithm is 94.24%.