Abstract

This paper studies recognition of fish shapes using both Region based and Contour based shape based descriptors[9]. Moment Invariants are chosen as the Region based descriptor and the Simple (geometric) shape descriptors (SSD) are used as Contour based shape descriptors. The shapes are varied through scaling and rotation. Manhattan Distance is used as the classifier. The study of the recognition rate by using moment invariants and simple shape descriptors is done separately. Each moment invariant (M1, M2, M3, M4 and M5) is studied separately and jointly. Then simple shape descriptors are combined with moment invariants to get hybrid feature vectors for improving recognition rate.

References

- S. Abbasi, F. Mokhtarian, J. Kittler, "Curvature scale space image in shape..."
Fish Shape Recognition using Multiple Shape Descriptors

- ShapeCN Dataset of the Scientific Computing Group,[fractal. ifsc. usp.br/dataset/ShapeCN.php]
- D. Chaudhuri, "Global Contour and Region Based Shape Analysis and Similarity
Fish Shape Recognition using Multiple Shape Descriptors

- Wirth, M. A. Image processing algorithms and applications. Lecture Notes. Dept. of Computing and Information Science, University of Guelph, Ontario. url:

Index Terms

Computer Science

Pattern Recognition

Keywords

Moment invariants  Eccentricity  Simple Shape Descriptors