FINAL YEAR PROJECT REPORT

HISTOGRAM OF EDGE-CONTOUR FOR ARIID FISH IMAGES

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ABSTRACT

Manual system to retrieve information about lots of images is hard and cumbersome. The information has to be extracted from books, journals, or any other printed or electronic media. Nowadays, image retrieval can be found in the form of complex system but at the same time making it easier to match images with other images when queried. This study is focused on extracting edges from images of fishes. It can be used to match and identify which family or species the fish came from and retrieve other images of fish of the same family in an image retrieval system which can be developed by enhancing this image processing system. The objective of this study is to develop a system to retrieve the edges of the fishes based on the real images. Other than that, the characteristics of local fishes are studied and suitable Edge Direction algorithm is identified which Canny Edge Detector is used, in order to extract the edges from images that are converted into black and white format. After the edges are obtained, the images are then separated into pixels so that the values of the edges are displayed by its respective histograms. With this research, it is hoped that when this system is fully developed and enhanced into an image retrieval system, the marine biologists will benefit from this system by making the fish identification easier than before.

Keyword: image processing, catfish image processing, Edge Direction Histogram (EDH), Canny Edge Detector, 8 axis chain code

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