

# **Underwater fish shape recognition in Malaysian seawater by using chain code techniques algorithm in real time image processing**

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## **Abstract**

A fish recognition system is to recognize the type of fish at sea taken using an underwater video camera. It is a computer vision application for automatically differentiating the species of fish. The system developed is to sort the type of fishes in Malaysian seawater. This paper proposed an algorithm of pattern recognition by using Matlab. The fish image recognition system is designed to differentiate the selected features of fish which are the shapes of the fish species. A Graphical User Interface (GUI) is being to represent the recognized fish species based on specific algorithm. The details of the fish are also stated in the GUI for operator information purpose. There are several process to make sure the final image is cleared and the system able to identify the fished detected. The Minimum Sum of Absolute Difference (SAD) method is used to calculate the difference between the chain code and the input fish image. The experiment results using simple technique show an acceptable results. The efficiency of this system is about 72%. © 2006-2017 Asian Research Publishing Network (ARPN). All rights reserved.

## **Author keywords**

Fish recognition Fish shape and texture Image processing Minimum sum of absolute differen