

Feature ion Laparoscopy Images of Sturgeon Based on Multi Target Genetic Algorithm to Sex Identification.

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Sturgeons of the Caspian littoral states an important loss sources of income. The cost of maintaining this type of fish is very high. The financial value of this type of fish is much larger than males. Therefore identify the gender of the fish at an early age in the fishing industry is a major challenge in throughput. Today, using a semi-aggressive and aggressive methods to identify the gender of the experts dealt with the screw. Recently, gender identification achieve using images of the gonad Laparoscopy and reviewed them. This determined on the basis of experience. In this study is proposed an automated system identify the gender of sturgeon. This is the system based on Laparoscopy image processing. The features of images extract Using image processing techniques and the best features are ed by genetic algorithm to detection of fish's gender. Finally, using clustering support vector machine Sex fish is diagnosed. The proposed system has been assessed and repeated by 100 times with genetic algorithms and the gender of 3-year-old fish detected by dividing the data using k-fold 5 to 14 with the accuracy of 97.98 percent. The images used on the 100 fish, 55 of them are male and 45 were female respectively.

Keywords : Keywords: sturgeon, gender detection, feature extraction, genetic algorithm

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