Content-based fauna image retrieval system

ABSTRACT

Many animal species exist in this world and there are always new species being discovered each year. Therefore, it is very important that these valuable species be documented properly to be referred to in future. Numerous information retrieval systems for managing and documenting animal species today only allow users to search animal images and descriptions online via text-based input. Therefore, people without knowledge on the animal species or without Internet access are not able to search using the systems. Motivated by these issues, the focus of this work is to construct a colour-shape content-based image representation for fauna. Two orders of the Colour Moment are used to represent the colour feature while the i-means approach is used to represent the shape feature. Based on the conducted quantitative and qualitative studies, the proposed fusion method together with the Content-based Image Retrieval (CBIR) system are found to be very effective in retrieving animal images similar to the given query, able to provide reliable and useful information on animal species, an easy system to interact with, and has easy to understand and user-friendly interfaces.

Keyword: Animals; Content-based image retrieval; Colour Moments; K-means