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A Context-Sensitive Algorithm for Media Similarity Search

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Abstract : This paper presents a context-sensitive media similarity search algorithm. One of the central problems regarding media search is the semantic gap between the low-level features computed automatically from media data and the human interpretation of them. This is because the notion of similarity is usually based on high-level abstraction but the low-level features do not sometimes reflect the human perception. Many media search algorithms have used the Minkowski metric to measure similarity between image pairs. However those functions cannot adequately capture the aspects of the characteristics of the human visual system as well as the nonlinear relationships in contextual information given by images in a collection. Our search algorithm tackles this problem by employing a similarity measure and a ranking strategy that reflect the nonlinearity of human perception and contextual information in a dataset. Similarity search in an image database based on this contextual information shows encouraging experimental results.

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