

Quick Similarity Measurement of Binary Images via Probabilistic Pixel Mapping

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Abstract : In this paper we present a quick technique to measure the similarity between binary images. The technique is based on a probabilistic mapping approach and is fast because only a minute percentage of the image pixels need to be compared to measure the similarity, and not the whole image. We exploit the power of the Probabilistic Matching Model for Binary Images (PMMBI) to arrive at an estimate of the similarity. We show that the estimate is a good approximation of the actual value, and the quality of the estimate can be improved further with increased image mappings. Furthermore, the technique is image size invariant; the similarity between big images can be measured as fast as that for small images. Examples of trials conducted on real images are presented.

Keywords : big images, binary images, image matching, image similarity

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