Introducing MRF in Patch-based Image Inpainting

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Abstract

The aim of inpainting is to reconstruct the injured or the unwanted portions of the picture, so as to make it appear real. Image inpainting techniques are used to restore the images which get damaged due to some reasons. Image inpainting techniques are also used to edit the image so as to remove the unwanted part of the image. Here, an approach of inpainting is proposed which is the patch based image inpainting. Patch-based image inpainting is a technique which uses a top down approach to divide the given image into variable sized blocks. This technique search for the candidate patches of the source region matching to those of the target patches. This approach can be employed to improve the speed and performance of patch-based inpainting method. Objective is to discover ways to remedy the primary faults that afflict digital and scanned photographs, using a combination of algorithms which make the inpainting process faster. To increase performance proposed a novel scheme called MRF (Markov Random Field) is proposed. MRF gives the prior knowledge about the neighboring image patches consistency.
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References

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Inpainting, patch-based image inpainting, texture features, context-aware, Markov random field modeling.