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RELIABLE COMPLETION OF IMAGES OF SCENIC LANDMARKS

[#1]Pavan Phad

[1]pavanphad@gmail.com

[#1]Computer Science And Engineering,

Jai Hind College of Engineering.

ABSTRACT

Though there have been many advancements in image completion, previous works have been focusing on the visual aspect instead of producing factually correct images. The proposed technique introduces the approach to complete the missing regions of an image but also preserve their factual correctness. It is assumed that the image is of a famous tourist destination. Images related to the input image are searched. These candidate images are blended with the input image to fix them. A ranking mechanism is used to rank images and the highly ranked images are shown to the user.

Keywords: Image Generation, Image Completion, Image Matching, Image Blending.

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I. INTRODUCTION

An application in which if an image contains any unwanted object then user should be able to select the object which is unwanted and the object should be removed from the image. Sometimes images clicked on a particular occasion often include undesirable objects or people. There is a need to recreate or repair missing parts of an image for getting a clear picture of the scene or situation Fixing missing image components does not yet have a reliable technique for image completion.

n this paper, we propose an image completion approach which aims to faithfully reconstruct a correct image. We assume that the input image was taken at a famous scenic landmark, and that a text label describing or naming the landmark is also given. We download thousands of images by searching the Internet using the text label, after which two-step filtering is applied to obtain a small set of candidate images from amongst the downloaded images. Specifically, we only retain candidates which are similar to the input image in gist feature space and which are well registered with the input image. Thus, the candidate images generally contain the same scene as the input image, but taken with different camera parameters, from different viewpoints, or under different illumination conditions.

II. LITERATURE SURVEY

LITERATURE SURVEY: Faithful Completion of Images of Scenic Landmarks Using Internet Images Author: Zhe Zhu, Hao- Zhi Huang, Zhi-Peng Tan, Kun Xu, and Shi-Min Hu Previous works on image Completion typically aims to produce visually plausible results rather than factually correct ones. In this paper, we propose an approach to faithfully complete the missing regions of an image. We assume that the input image is taken at a well-known landmark, so similar images taken at the same location can be easily found on the Internet. We first down-load thousands of images from the Internet using a text label provided by the user.

Space-time completion of videoAuthor:Y. Wexler, E. Shechtman, and M. IraniThis paper presents a new framework for the completion of missing information based on local structures. It poses the task of completion as a global optimization problem with a well-defined objective function and derives a new algorithm to optimize it. Missing values are constrained to form coherent structures with respect to reference examples. We apply this method to space-time completion of large space-time holes in video sequences of complex dynamic scenes.

Barnes, E. Shechtman, A. Finkelstein, and D. Goldman, "Patch- match: a randomized correspondence algorithm for structural image editing,"ACM Trans. Graph. , vol. 28, no. 3, pp. 24–34, 2009.

III. CANDIDATE IMAGE FILTERING

To achieve faithful image completion, we need to use content from other images which contain the same scene as the input image. To do so, we first download several thousand images from Flickr using the text label associated with the input image. As most of the downloaded images are unrelated to the input image, we use gist scene descrip- tors with 8 orientations and 4 scales to discard dissimilar images. The candidate images after initial filtering are denoted by Sg(their number is denoted Ng). Next, we need to find which candidate images contain the same content as the input. For this purpose, we define a registration score for each candidate image, which measures how well it can be registered to the input image.

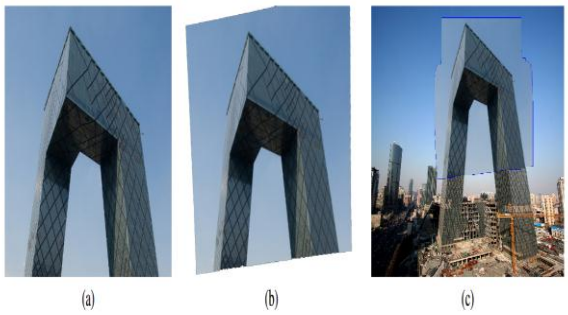

Fig. 2. (a) Part of the candidate image. (b) Warped result.(c) Optimal seam (blue).

IV. WORKING

Image Completion: Image completion approaches can be classified into diffusion based and example based ap- proaches. Diffusion based methods aim to extend image structures into small holes, and so cannot deal with large missing regions. Recent work has main-ly focused on example based methods. Texture synthesis methods are example-based and perform well on images with holes in textured regions. The bottleneck lies in finding patch correspondences, which is time consuming. Patch Match utilizes the observation that neighbors of matched patches are also likely to be matched to signifi- cantly accelerate the process.

Internet Image Processing: In recent years, researchers have developed many Internet-based techniques for e.g. scene completion, city reconstruction, photo en- hancement and image montage synthesis . Such works construct a large database by downloading millions of images from the Internet, and use this as a data source for different image processing tasks. Our work also belongs to this category.

V. PROBLEM DEFINITION AND SCOPE

GOAL AND OBJECTIVES :USING TWO STEP FILTERING TO REDUCE THE SET OF CANDIDATE IMAGES USE A COMBINATION SCORE TO RANK IMAGES.

Statement of Scope: Input to the software will be the image to be repaired and the name of the landmark. The input image should belong to one of the famous landmarks on the earth. The software will give repaired factually correct images as output.A description of the software with Size of input, bounds on input, input validation, input dependency, I/O state diagram, Major inputs, and outputs are described without regard to implementation detail.The software is used to remove the unwanted object or a person from a image which is clicked on a famous landmark. When user gives input as defected image and the string associated with the landmark then it will search the database for the images with same name as the string given. By using ranking algorithm the algorithm will choose images with the same viewpoint as that of the input image. The input image will be patched by the image with the highest rank. The limitation of the algorithm is that it is not capable of patching the images which are not clicked on the famous landmarks.

Major Constraints: The software should able to patch the image which is factually correct. Any constraints that will impact the manner in which the software is to be specifieddesigned, implemented or tested are noted here.

Problem Solving and Efficiency issues: System is implemented as follows:

a. Input Image with unwanted object.
b. Select the object which is to be removed.
c. It is selected in a polygon and shaded green.
d. Pixels of the selected object are matched within the image.
e. Replace the matching pixels in place of the selection.
f. Display the image with the object removed.
g. Efficiency issues
h. Efficiency is dependent on the resolution of the image.

Outcome: Patched image will be obtained with the selected object removed.

VI. LIMITATIONS

Our method may fail in some cases. For example, if the viewpoint differs greatly between the input and candidate images, it may be hard to find a reasonable warp from the candidate image to the input image, leading to results with inconsistent alignment (see Figure 12, first row). Further- more, if there are large tone and illumination differences between the input image and the candidate image, visible

color inconsistency artifacts may result (see Figure 12, second row). Another limitation of our approach is that it cannot handle cases when the target region is too large. This is because our approach relies on correspondences between two images outside the target region, and if the target region is too large, there will be few matches. The point and line terms of the energy function will have less impact so the optimization cannot give a reasonable warp (see Figure 12, third row).

VII.FUTURE WORK

In future, to improve result quality, we plan to add an additional color transfer step to deal with cases when there are large tone and illumination differences between the input and candidate images. We also plan to extend our warping method to more general cases, such as adding support for panoramas.

VIII. CONCLUSION

The software application is generated which allows the user to open a image and select the object which is unwanted in that image. Then the system removes the unwanted object and generates new image. In future advancements the precision of the algorithm so that the patched image is factually correct. A completion result is obtained through gradient domain blending. The completion results with highest combination scores, which consider both warping and blending energy, are then displayed to users. We have validated our approach on many famous landmarks; experiments show that our approach can generate faithful results in most cases.

REFRENCES

[1] R. S. Pressman, Software Engineering (3rd Ed.): A Practitioner's Approach.New York, NY, USA: McGraw-Hill, Inc., 1992.

[2] P. Kulkarni, Knowledge Innovation Strategy. Pune: BloomsburyPublication, 2015.

[3] P. Sinha, Electronic Health Record. IEEE Press Wiley.

[4] McKinsey, "Big data: The next frontier for innovation, competition, and productivity," tech. rep.

[5] "Digital competition: http://www.mckinsey. com/insights."

