Subject: Re: Image Inpainting
Posted by Gianluca Li Causi on Mon, 26 Jan 2009 12:29:23 GMT
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On Jan 21, 6:19 pm, erano <eran.o...@gmail.com> wrote:
> On Jan 21, 3:42 pm, "Jean H." <jghas...@DELTHIS.ucalgary.ANDTHIS.ca>
> wrote:
>
>
>
>> erano wrote:
>>> Hello,
>>> I'm looking for a simple IDL code for Image Inpainting.
>
>>> Input is an image (2D) with small missing areas, and I wish to add
>>> values to the unknowm pixels, based on the known pixels.
>
>>> Thanks
>>> Eran
>
>> Hi Eran,
>
>> there are a lot of ways of filling missing pixels... one of them is to
>> have a 3*3 (or else) window that moves over your image. When the central
>> pixel is a "missing" one, get the value of the pixels in the window and
>> assign the majority value to the missing pixel... this works well for
>> classification, you might want to do an average instead if you have
>> continuous values.
>
>> The trick is not to assign the missing value to any pixel, even if it is
>> the majority value, so you would have to iterate it several times... And
>> of course, your window doesn't need to move over the whole image, just
>> select the missing pixels via Where().
>
>> Jean
>
> Hi,
> The missing pixels are in a groups so I can not do so.
> For now I'm using the MPFIT2DFUN.PRO (Craig's
codehttp://www.physics.wisc.edu/~craigm/idl/idl.html)
>
> I'm using a binary mask for the WEIGHTS, but the result is not smooth
> at all.
> If I take the missing edge then I must to keep the fit function (f) to
> be also fit on the 2D gradient function (df/dx and df/dy) on the
> bounds.
> Can I add these rules to the MPFIT2DFUN ?

Dear Eran,
image inpainting is a difficult task: I don't know what kind of images you're qpeaking of, but in general you should also fit the laplacian at the border (e.g.: consider to have a group of missing pixels on a circle: your inpainting should propagate the curve at the border, in order to reconstruct the circle). More, you should also propagate the texture, or the noise, in the image.
If a totally *manual* intervention is ok for you, I suggest to use the very very powerful "healing tool" of PhotoShop CS3, which is able to do al that with one click.
Try it, sometimes it is really incredible.

Hope to be of help
bye
Gianluca
