Subject: Find shift and rotation between two images.
Posted by frankosuna on Thu, 12 Feb 2009 21:10:58 GMT
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Is there code out there to figure out by how many pixels an image is shifted from it's original as well as the angle?

Subject: Re: Find shift and rotation between two images.
Posted by KRDean on Sun, 15 Feb 2009 02:22:39 GMT
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frankosuna wrote:
> Is there code out there to figure out by how many pixels an image is
> shifted from it's original as well as the angle?

Image registration (shift and rotation) is a popular subject on this newsgroup. Have you looked for previous post on this topic in idl-pvwave?

I found these two papers to be very helpful when I was investigating image registration techniques dealing with FFT using IDL to find shift and rotation.

An IDL/ENVI implementation of the FFT-based algorithm for automatic image registration
By Hongjie Xie

and

Understanding FFT- based algorithm to calculate image displacements with IDL programming language
By Cynthia Rodriguez, University of Texas at San Antonio

There is a Word DOC of Xie's paper at UTEP ...

http://research.utep.edu/Default.aspx?PageContentMode=1& tabid=30376

However, my favorite IDL image registration process are the auto alignment IDL routines by T. Metcalf that are found at SOHO. He doesn't use FFT's, but implements cross correlation techniques that work very well to find shift and rotation between images.

Kelly Dean
Fort Collins, CO

Subject: Re: Find shift and rotation between two images.
Posted by Vince Hradil on Sun, 15 Feb 2009 02:50:24 GMT
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On Feb 14, 8:22 pm, kBob <KRD...@gmail.com> wrote:
> frankosuna wrote:
>> Is there code out there to figure out by how many pixels an image is
>> shifted from it's original as well as the angle?
>
> Image registration (shift and rotation) is a popular subject on this
> newsgroup. Have you looked for previous post on this topic in idl-
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> and rotation.
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> However, my favorite IDL image registration process are the auto
> alignment IDL routines by T. Metcalf that are found at SOHO. He
> doesn't use FFT's, but implements cross correlation techniques that
> work very well to find shift and rotation between images.
>
> Kelly Dean
> Fort Collins, CO

Wow - now there's a post chock full of info! Thanks Kelly!

Subject: Re: Find shift and rotation between two images.
Posted by Thomas Launey on Tue, 17 Feb 2009 02:07:30 GMT
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Hello,

I knew the Hongjie Xie code but I am curious about the Metcalf
approach. Would you please provide a link
Thanks,
Thomas

Subject: Re: Find shift and rotation between two images.
Posted by frankosuna on Tue, 17 Feb 2009 02:12:04 GMT
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On Feb 16, 7:07 pm, Thomas Launey <t_lau...@brain.riken.jp> wrote:
> Hello,
>
> I knew the Hongjie Xie code but I am curious about the Metcalf
> approach. Would you please provide a link
> Thanks,
> Thomas

I am using the Hongjie code right now. Looks good.
Thanks to Dr. Kreinovich and Co.

Subject: Re: Find shift and rotation between two images.
Posted by KRDean on Tue, 17 Feb 2009 15:09:16 GMT
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On Feb 16, 7:07 pm, Thomas Launey <t_lau...@brain.riken.jp> wrote:
> Hello,
>
> I knew the Hongjie Xie code but I am curious about the Metcalf
> approach. Would you please provide a link
> Thanks,
> Thomas

The auto_algin_images.pro (by Metcalf) code can be found at the Solar
and Heliospheric observatory (SOHO) :

http://soho.nascom.nasa.gov/

The IDL code is located in :

http://soho.nascom.nasa.gov/softops/cds/idl/

I find you need :

auto_algin_images.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/

idl/image/)
  pq2rss.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/image/)
  pq2pp.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/image/)
  rss2pq.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/image/)
  amoebax.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/fitting/)
  amotry.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/fitting/)
  ocontour.pro (http://sohowww.nascom.nasa.gov/solarsoft/gen/idl/display/)

  pq2rss uses this routine ...
  arange.pro (http://www.solar.ifa.hawaii.edu/Tropical/Bin/IDL/)

Kelly Dean
Fort Collins, CO

Subject: Re: Find shift and rotation between two images.
Posted by venom25 on Thu, 27 Jun 2013 20:12:57 GMT
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On Thursday, 12 February 2009 21:10:58 UTC, frankosuna wrote:
> Is there code out there to figure out by how many pixels an image is
> shifted from it's original as well as the angle?

Hello frankosuna and any friend,

I cannot find the the Hongjie code, Please help.

Than
