
Subject: Re: Wanted: Hough transform
Posted by [sterner](#) on Fri, 10 Mar 1995 23:03:42 GMT
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Wayne E. King <weking@llnl.gov> writes:

> I seek a high speed Hough transform algorithm for detection of lines in
> images. IDL code preferred.

My IDL library has a routine called radon which I made to do exactly
what you state above. The built-in help for this routine is:

```
IDL> help,radon(/help)
Compute the Radon Transform using the FFT method.
t = radon(img)
  img = input image. Must be square.  in
  t = Radon Transform of img.          out
Keywords:
  EMBED=n size of zero image to embed given image in.
  Def=no embed.
  START=a1 start angle in degrees, default=0.
  STOP=a2 stop angle in degrees, default=179.
  STEP=da angle step in degrees, default=1.
  ANGLES=ang returned list of angles used.
  /DEBUG does a debug stop.
Notes: Images must be byte.
No preprocessing is done.
It may be useful to subtract the mean.
Ref: Linear feature detection and enhancement in noisy
images via the Radon transform,
Lesley M. Murphy, Patt. Rec. Letters 4 (1986) 279.
```

Make sure you use the EMBED keyword to embed your image in a
larger image of zeros, it greatly improves the transform. I use this
routine to successfully detect linear features in ocean images.
I only did two cases. You are on your own, I can do much support
for this routine, other than make it available.

The JHU/APL/S1R IDL library is available by anonymous ftp as follows.

```
ftp fermi.jhuapl.edu
login: anonymous
password: enter your email address
cd pub/idl
get README
bye
```

Follow the instructions in the README (~6.6k bytes) file to get the actual library. You may also want to get the one line description file cat.one (~30kb).

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