Subject: Re: Help needed!!
Posted by Craig Markwardt on Fri, 16 Apr 2010 16:23:45 GMT
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On Apr 16, 12:18 pm, bala murugan <bala2...@gmail.com> wrote:
> On Apr 16, 10:10 am, pp <pp.pente...@gmail.com> wrote:
>
>
>
>> On Apr 16, 12:49 pm, bala murugan <bala2...@gmail.com> wrote:
>
>>> I am new to IDL. This is my first program in IDL. Can somebody point
>>> out the errors in my code. I have been struggling to get it right.
>
>> If you do not say what you want to do, and what the problem is, we are
>> unlikely to guess it.
>
>>> FUNCTION poissondist,fLambda,N
>>> r = RANDOMU(SEED,1)
>>> FOR j=1,N,1 DO BEGIN
>>> x=poisson(j,fLambda)
>>> if (x EQ r) THEN a[i]=j
>>> ENDFOR
>>> RETURN,a
>>> END
>
>> a is never defined, which would cause an error when you try to do
>> a[i]=j. However, you seem to avoid this occurring with a condition
>> that looks like may never happen (x eq r).
>
> My aim is to do the following,
>
> To write an IDL routine that takes as input the mean of a Poisson
> distribution (fLambda = a floating point number >= 0.0) and a number
> of realizations (N), and generates N samples from the Poisson
> distribution with mean fLambda. The output samples should be provided
> as a vector (list) of integers (each >= 0). I will also want to plot
> a histogram of the samples (IDL probably has a built-in histogramming
> routine).
>
> My subroutine/program will look something like this...
>
> piSamples = PoissonDist(fLambda, N)
> piSamples = vector of N integer samples returned by the routine
> fLambda = mean of the Poisson distribution
> N = number of samples to generate
>
> This routine will need to loop n = 1..N Each time through the loop,

> it will need to call RANDOMU to get a random number between 0.0 and
> 1.0. It will then need to call IMSL_POISSONCDF (probably repeatedly)
> to determine which integer in the Poisson distribution corresponds to
> the random number gotten from RANDOMU. This integer is then placed in
> the output vector, etc.
>
> I am not using IMSL_POISSONCDF. Rather I am calculating the poisson
> probability myself.
>
> Can you please help me with this?

You might also want to check out an existing and well-tested Poisson deviate generator in the IDL Astronomy Library, called POIDEV.

http://idlastro.gsfc.nasa.gov/ftp/pro/math/poidev.pro

Craig
