On Apr 16, 12:39 pm, bala murugan <bala2...@gmail.com> wrote:
> On Apr 16, 10:23 am, Craig Markwardt <craig.markwa...@gmail.com>
> wrote:
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>> On Apr 16, 12:18 pm, bala murugan <bala2...@gmail.com> wrote:
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>>> On Apr 16, 10:10 am, pp <pp.pente...@gmail.com> wrote:
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>>>> 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
>
> Does the poidev do the same thing as what I want to accomplish?

Yes of course.

meanval = dblarr(N) + fLambda ;; Desired mean value

;; Poisson deviates with mean value fLambda
piSamples = poidev(meanval, seed=seed)

Craig