Subject: Re: L-moments
Posted by rogass on Mon, 28 Feb 2011 11:43:17 GMT
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On 25 Feb., 16:25, Mark Shephard <mark.w.sheph...@gmail.com> wrote:
> Hi,
>
> I was wondering if anyone has anyone develope IDL routines for the
> method of L-moments?
>
> Thanks,
> Mark

Hi Mark,
something like this?

```
function cr_binomial,n,m
 n1=1d & m1=1d & n1m1=1d
 for i=1d,n do n1*=i
 for i=1d,m do m1*=i
 for i=1d,(n-m) do n1m1*=i
 return,n1/(m1*n1m1)
end

function cr_l_moment,dat
n=n_elements(dat)
l1 = total(dat,/double)/cr_binomial(n,1)
l2=0d &l3=0d &l4=0d
for i=1d,n do begin
 b1 = cr_binomial(i-1,1d)
 b2 = cr_binomial(n-i,1d)
 b3 = cr_binomial(i-1,2d)
 b4 = cr_binomial(n-i,2d)
 b5 = cr_binomial(i-1,3d)
 b6 = cr_binomial(n-i,3d)
 l2+=(b1-b2)*dat[i-1l]
 l3+=(b3-2*b1*b2+b4)*dat[i-1l]
 l4+=(b5-3*b3*b2+3*b1*b4+b6)*dat[i-1l]
endfor
l2*=0.5d /cr_binomial(n,2d )
l3*=(1d / 3d )/cr_binomial(n,3d )
l4*=(1d / 4d )/cr_binomial(n,4d )
return,{l1:l2,l2:l2,l3:l3,l4:l4}
end

IDL> r=randomu(seed,5,5)
IDL> inf=cr_l_moment(r)
IDL> print,float(inf)
```

{ -0.000558181 -0.000558181  -0.0111168  0.212071}

Cheers

CR