Subject: Re: Principal component analysis
Posted by Vince Hradil on Wed, 05 Dec 2007 16:13:45 GMT
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On Dec 5, 10:08 am, "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote:
> I have tried that, it gives
> IDL> ev=imsl_princ_comp(correlate(a,/cov)) & print,ev
> 45.2906 3.70938-2.65683e-006
>
> These EVs are the same as you get using PCOMP with /COV keyword.
>
> "Vince Hradil" <hrad...@yahoo.com> wrote in message
>
> news:54fc6ed8-ccd7-4ac6-8e0d-09f5d190eeac@o6g2000hsd.googleg roups.com...
>
>> On Dec 5, 9:12 am, Vince Hradil <hrad...@yahoo.com> wrote:
>>> On Dec 5, 8:00 am, "Haje Korth" <haje.ko...@nospam.jhuapl.edu> wrote:
>
>>>> Hi,
>>>> I am puzzled by principal component analysis. I calculated the
>>>> eigenvalues
>>>> using both PCOMP and IMSP_PRINC_COMP routines. Could someone enlighten
>>>> me
>>>> why the results are completely different? I have tried different
>>>> keywords to
>>>> see whether I can match them by trial and error, but I had no success.
>>>> There
>>>> must be someone out there who undertstands this much better than I do.
>
>>>> Thanks so much,
>>>> Haje
>
>>>> IDL> a=[[1,-2,-6],[-2,1,-3],[-6,-3,5]]
>>>> IDL> pca=pcomp(a,eigenvalues=ev) & print,transpose(ev)
>>>> 2.24227 0.757732 0.000000
>>>> IDL> ev=imsl_princ_comp(a) & print,ev
>>>> 9.53359 -5.19751 2.66392
>
>>> From the HELP:
>
>>> Syntax
>>> Result = IMSL_PRINC_COMP(covariances [, /COV_MATRIX]
>>> [, /CORR_MATRIX] [, CORRELATIONS=variable] [, CUM_PERCENT=variable] [,
>>> DF=variable] [, /DOUBLE] [, EIGENVECTORS=variable] [,
>>> STDEV=variable])
>
>>> Note that IMSL_PRINC_COMP requires that you pass the covariance or
>>> correlation matrix - not the vectors.

>
>> so maybe try
>> ev=imsl_princ_comp(correlate(a,/covariance) & print, ev
>> (I don't have an analyst license)

There you go 8^)
How about
ev=imsl_princ_comp(correlate(a)) & print, ev