Subject: Re: Principal component analysis
Posted by Vince Hradil on Wed, 05 Dec 2007 15:14:14 GMT
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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)