Subject: Re: Principal component analysis
Posted by Vince Hradil on Wed, 05 Dec 2007 15:12:09 GMT
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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.