Subject: Re: Principal component analysis
Posted by Haje Korth on Wed, 05 Dec 2007 16:47:33 GMT
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Yup, that'll do it. I am still not sure I understand the logic behind this.
I though the correlation is part of the PCA.

"Vince Hradil" <hradilv@yahoo.com> wrote in message
news:8362380a-217a-45d2-b7c4-0198e5931b39@y5g2000hsf.googleg roups.com...
> 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
