Re: singular covariance matrix Gaussian pdf question

Source: http://sci.tech−archive.net/Archive/sci.stat.math/2007−02/msg00017.html

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- *From*: vontressms@xxxxxx
- *Date*: 2 Feb 2007 05:53:00 −0800

On Jan 30, 12:17 pm, "zl2k" <kdsfin...@xxxxxxxxx> wrote:

> hi, all
> I searched the group and found some message dealing with the singular
> covariance matrix problem. One of which is using pseudo inverse based
> on svd to generate pseudo inversed covariance matrix for the singular
> matrix. My question, in order to calculate the Gaussian pdf, how
> should I deal with the determinant of the singular matrix which is 0
> and will give inf in gaussian pdf? Thanks for comments.
> zl2k

It's the product of the non−zero singular values. Ray gave a good geometric explanation of why this works. It's the determinant of the full support basis vectors of the covariance matrix.

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