

---

Subject: Re: Covariance Matrix

Posted by [haval.js](#) on Wed, 05 Mar 2014 10:43:44 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

On Wednesday, 5 March 2014 10:38:52 UTC, hava...@gmail.com wrote:

> On Tuesday, 4 March 2014 14:22:43 UTC, Matthew Argall wrote:

>

>>> My case is related to calculated the principle eigen vector for 5by5 pixel window, which can be represented by one vector only.

>

>>

>

>>

>

>>

>

>> So, you have an array with 25 elements that can be represented by a 5x5 matrix and you want to diagonalize the matrix to get the eigenvalues and eigenvectors?

>

>>

>

>>

>

>>

>

>> If this is what you are trying to do, there is an example with a 4x4 matrix on the Eigenvec help page

>

>>

>

>> <http://exelisvis.com/docs/EIGENVEC.html>

>

>>

>

>>

>

>>

>

>> I do not think you want the covariance of a single vector, but you would need to give a little more information to help further...

>

>

>

> Dear Matthew,

>

>

>

> Thank you very much for your reply, I am really appreciate it. The answer were very useful. I

thought that first I have to construct vector from pixels then calculating eigen value and then eigen vector. But, according to your explanation the work become much easier.

>

>

>

> I am trying to fuse images, my work is related to find the covariance matrix in order to find the principle eigen vector, WHICH IS corresponding to the eigenvalue of largest magnitude. Finally substitute the values in the model.

>

>

>

> Thank you

>

> Haval

To me more detailed, I have a window 5x5 which moves over the images, and at each move I have to find the principle eigen vector.

regards

Haval

---