Subject: Re: KMean Clustering of RGB Images
Posted by Mort Canty on Wed, 09 May 2007 14:43:05 GMT
View Forum Message <> Reply to Message

helaha@gmx.net schrieb:

> Hello Mort,
> yes, the order should not play any role, but nevertheless the
> clustering of an RGB image, implemented with the example code above
> showed a dependency and that's my problem. I can't imagine why the
> CLUSTER_WTS Algorithm is sensitive to the sequence order.
> The clustering results are very stable and I think really identical,
> if the algorithm is started several times without changing the data
> sequence. Changing the data sequence leads to a very distinct and yet
> again very stable clustering result. But why is there this dependency
> on data sequence?
>
> Many thanks,
> Helmut
>

Yes, I get the same effect. I had difficulty following your code so I reduced it to essentials (I hope):

```
PRO Cluster_KMean_Image
    ImageName = DIALOG_PICKFILE()
    CD, FILE_DIRNAME(ImageName)
    READ_JPEG, ImageName, RGBImage
    Info = SIZE(RGBImage)
    ImageSizeX = Info[2]
    ImageSizeY = Info[3]
    PixelN = ImageSizeX*ImageSizeY
;  optional
;    RGBImage = TRANSPOSE(RGBImage, [0, 2, 1])
    print, CLUST_WTS(REFORM(RGBImage, 3, PixelN), $
                N_CLUSTERS = 2, N_ITERATIONS = 20)

END
```

It just prints out the cluster means. On a small JPEG image they are nicely reproducible. But they should also be the same whether the TRANSPOSE function is called or not. And as you say, they aren't. I hesitate to think that there is a bug in CLUSTER_WTS, but just now I don't see an alternative explanation.

- Mort