Subject: Re: efficient kernel or masking algorithm ?
Posted by Richard Tyc on Wed, 29 Nov 2000 08:00:00 GMT
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WOW, I need to look at these equations over about a dozen times to see what is going on ?

I have been struggling with the variance of an nxn window of data, INCLUDING central pixel

```
;mean of the neighboring pixels (including central)
mean=smooth(arr,n)
;square deviation from that mean
sqdev=(arr-mean)^2
;variance of an nxn window of data, INCLUDING central pixel
var=(smooth(sqdev,n)*n^2-sqdev)/(n^2-1)
```

This doesn't seem correct with test samples ? (Only difference is mean and division by n^2-1 ??)

Thanks JD

Rich

J.D. Smith <jdsmith@astro.cornell.edu> wrote in message news:3A25758E.A83B10CA@astro.cornell.edu...

```
>
>  Oh my this is a common topic lately.  See my recent posts in a thread
>  with title "Array Manipulations".  Here's the good stuff:
>
>  ; the nxn window total
>  total=smooth(arr,n)*n^2
>  ; the nxn window total not including central pixel
>  neighbors=smooth(arr,n)*n^2-arr
>  ; the mean of the neighboring pixels (excluding central)
>  neighmean=(smooth(arr,n)*n^2-arr)/(n^2-1)
>  ; the square deviation from that mean
>  sqdev=(arr-neighmean)^2
>  ; the variance of an nxn window of data, excluding central pixel
>  imvar=(smooth(sqdev,n)*n^2-sqdev)/(n^2-2)
>
>  Take a look at the "EDGE*" keywords too, if you care about what happens
>  near the borders.
>
>  JD
>
>  --
```

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