Csh

sswidl

--------------

aaa = **dist**(**2048**,**2048**)

imgsize = **size**(aaa)

aaaplot = **IMAGE**(aaa , IMAGE\_DIMENSIONS=[imgsize(**1**),imgsize(**2**)], DIMENSIONS=[**512**,**512**], MARGIN=**0**)

A close up of a logo

Description automatically generated

maskplot = IMAGE(mask , IMAGE\_DIMENSIONS=[imgsize(1),imgsize(2)], DIMENSIONS=[512,512], MARGIN=0)

Shape

Description automatically generated

result = **IMAGE\_THRESHOLD**(mask , THRESHOLD=maxmask)

maskplot = **IMAGE**(result , IMAGE\_DIMENSIONS=[imgsize(**1**),imgsize(**2**)], DIMENSIONS=[**512**,**512**], MARGIN=**0**)

**Mask: chooses outside the disk**

Icon

Description automatically generated

img = READFITS( files(q), outhdr, /NOSCALE)

imgsize = **size**(img)

implot = **IMAGE**(img , IMAGE\_DIMENSIONS=[imgsize(**1**),imgsize(**2**)], DIMENSIONS=[**512**,**512**], MARGIN=**0**)

A star in the dark

Description automatically generated

img = alog(img>0.01)

A picture containing sitting, photo, table, monitor

Description automatically generated

img = sigma\_filter(img,radius=3,/iterate)

A picture containing sitting, photo, table, apple

Description automatically generated

img(mask\_idx) = (sigma\_filter(img,radius=13,/iterate))(mask\_idx)

max =800

A picture containing sitting, photo, table, monitor

Description automatically generated

Max= 400

A picture containing sitting, table, photo, apple

Description automatically generated

A picture containing table

Description automatically generatedTable

Description automatically generated

VIII

VII

VI

V

VIII

VII

VI

V

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A15 | A05 | A05 | A15 | A25 | A30 | A45 | A55 | A65 | A65 | A55 |
| A16 | A06 | A06 | A16 | A26 | A36 | A46 | A56 | A66 | A66 | A56 |
| A16 | A06 | A06 | A16 | A26 | A36 | A46 | A56 | A66 | A66 | A56 |
| A15 | A05 | A05 | A15 | A25 | A30 | A45 | A55 | A65 | A65 | A55 |
| A14 | A04 | A04 | A14 | A24 | A34 | A44 | A54 | A64 | A64 | A54 |
| A13 | A03 | A03 | A13 | A23 | A33 | A43 | A53 | A63 | A63 | A53 |
| A12 | A02 | A02 | A12 | A22 | A32 | A42 | A52 | A62 | A62 | A52 |
| A11 | A01 | A01 | A11 | A21 | A31 | A41 | A51 | A61 | A61 | A51 |
| A10 | A00 | A00 | A10 | A20 | A30 | A40 | A50 | A60 | A60 | A50 |
| A10 | A00 | A00 | A10 | A20 | A30 | A40 | A50 | A60 | A60 | A50 |
| A11 | A01 | A01 | A11 | A21 | A31 | A41 | A51 | A61 | A61 | A51 |

A close up of a sign

Description automatically generated

Total(k) = 11

Convolve

**kconvol**(A,k,**total**(k))

**CONVOL**(A,K,scale\_factor)

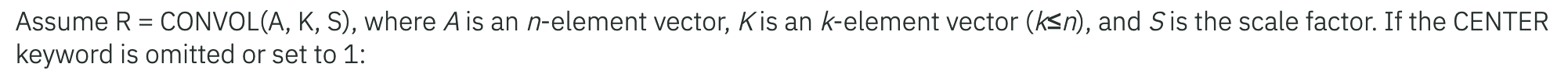
A scale factor that is divided into each resulting value.

the kernel is centered over each data point.

In the two-dimensional, zero CENTER case where *A* is an *m*-by-*n*-element array, and *K* is the *k*-by-*k* element kernel; the result *R* is an *m* by *n*-element array:

It is usually not appropriate to divide the result value by the full scale factor if portions of the kernel were not applied due to missing data. In this case, you might want to use the [NORMALIZE](https://www.harrisgeospatial.com/docs/CONVOL.html#C_854643309_1297207) keyword instead.

If NORMALIZE is set and your input array has missing data (the [INVALID](https://www.harrisgeospatial.com/docs/CONVOL.html#C_854643309_1297467) or [NAN](https://www.harrisgeospatial.com/docs/CONVOL.html#C_854643309_1028683) keywords are set), then for each result value the scale factor and bias are computed using only those kernel values that contributed to that result value. This ensures that all result values are comparable in magnitude, regardless of any missing data. Use caution when analyzing these values, as the result may be biased by having fewer points within the kernel.



Text

Description automatically generated

*S* is the scale factor.

Smooth:

**SMOOTH**(A,kernel)

A picture containing text

Description automatically generated

where *w* is the smoothing width and *N* is the number of elements in A

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A15 | A05 | A05 | A15 | A25 | A30 | A45 | A55 | A65 | A65 | A55 |
| A16 | A06 | A06 | A16 | A26 | A36 | A46 | A56 | A66 | A66 | A56 |
| 16 | A06 | A06 | A16 | A26 | A36 | A46 | A56 | A66 | A66 | A56 |
| A15 | A05 | A05 | A15 | A25 | A30 | A45 | A55 | A65 | A65 | A55 |
| A14 | A04 | A04 | A14 | A24 | A34 | A44 | A54 | A64 | A64 | A54 |
| A13 | A03 | A03 | A13 | A23 | A33 | A43 | A53 | A63 | A63 | A53 |
| A12 | A02 | A02 | A12 | A22 | A32 | A42 | A52 | A62 | A62 | A52 |
| A11 | A01 | A01 | A11 | A21 | A31 | A41 | A51 | A61 | A61 | A51 |
| A10 | A00 | A00 | A10 | A20 | A30 | A40 | A50 | A60 | A60 | A50 |
| A10 | A00 | A00 | A10 | A20 | A30 | A40 | A50 | A60 | A60 | A50 |
| A11 | A01 | A01 | A11 | A21 | A31 | A41 | A51 | A61 | A61 | A51 |