Numpy

12 December 2024

15:12

A Python Library that provides a multi-dimensional array object

1D Array example:

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2D Array example:

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3D Array Example:

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To make into an array:



Convert Images to Arrays

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Im\_g variable is storing an image

We can read this using cv2.imread()

This expects two arguments:

,0 = Greyscale

,1 = BGR (Blue Green Red)

Create a new image:

A white rectangular sign with red text

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cv2.imwrite("*Name*", *Image Array*)

Indexing, Slicing and Iterating Arrays

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Slicing Arrays:

We can slice arrays, the same way we would slice a list (variable[column index, row index])

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Indexing Arrays:

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Iterating Arrays:

.flat allows you to access values in an array 1-by-1

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Stacking and Splitting Arrays

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15:50

Stacking Arrays to each other:

We could use numpy.hstack (Horizontal Stack) or numpy.vstack (Vertical Stack), and store the arrays in tuples, as vstack / hstack only take 1 argument:

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\*\*Note they will need to be same number of dimensions

Splitting Arrays from each other:

We can do the opposite using hsplit / vsplit:

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Note that the 2nd argument is the divison - they will need divide into equal arrays (number of columns/rows):

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