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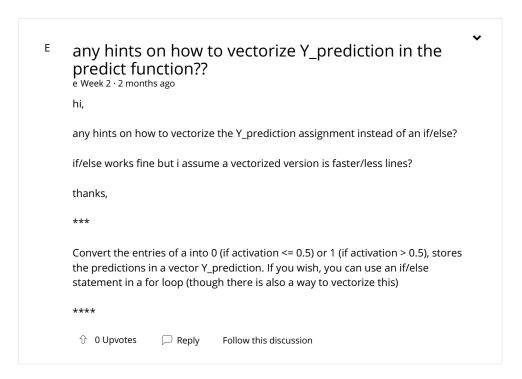
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Discussion Forums

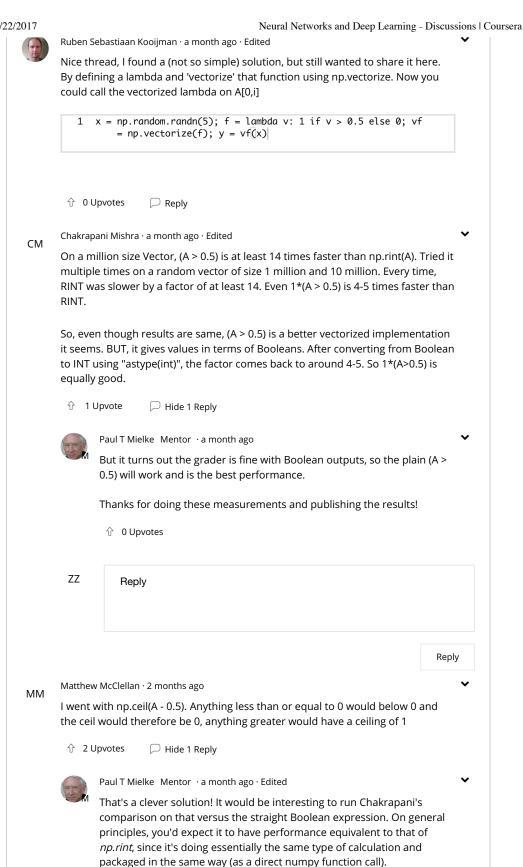
Week 2

| SUBFORUMS |
|--|
| All |
| Assignment: Python Basics with numpy (optional) |
| Discussing important concepts |
| Assignment: Logistic Regression with a Neural Network mindset |
| Assignment: Practice Questions |

← Week 2



Earliest Top Most Recent



û Upvotes ZZ Reply

| 199 | Fred Fis | cher Mentor · 2 months ago · Edited | ~ |
|-----|-----------------|--|-------|
| M | Y_pred | d up using Y_prediction = np.ceil($2*A$)-1 which is pretty obscure liction = 1 * (A > 0.5) is much better and more readable. At first I used nd, but that sends 0.5 to 1 which is wrong the rule is that A <= 0.5 shown. | uld |
| | Ŷ 0 U | Jpvotes | |
| ΥH | Yechen | Huang · 2 months ago | ~ |
| ••• | neares | is a built-in function numpy.rint which round elements of the array to th t integer. /docs.scipy.org/doc/numpy/reference/generated/numpy.rint.html | e |
| | ∱ 31 | Jpvotes | |
| | HC | He Chaoyi · 2 months ago | ~ |
| | | Good suggestion! Thx! | |
| | ZZ | Reply | |
| | | F | Reply |
| | e·2 mo | onths ago | ~ |
| E | sendin numer | suggestions, but is using a list comprehension type of argument just g the loop inside a function like "np.where" instead of actually using sor ical method for more efficiency? Jpyotes Reply | ne |
| | | Yang · 2 months ago | ~ |
| CY | | liction = 1 * (A >= 0.5) | · |
| | | Jpvotes | |
| | | Zacchaeus Williams · 2 months ago | ~ |
| | 13 | How is this right? Can you explain. | |
| | | 介 0 Upvotes | |
| | GJ | Gabriel Juarez · 2 months ago · Edited | ~ |
| | | # test the idea: | |
| | | A = np.arange(4) | |
| | | print A | |
| | | Y_prediction = 1 * (A >= 2) | |
| | | print Y_prediction | |
| | | | |
| | | [0 1 2 3] | |
| | | [0 0 1 1] | |
| | | | |

under the hood, for every value in A, we test \geq 0.5, makes a True/False, which works as a 1/0...

We end up multiplying 1 * 1 or 1* 0, depending on the result of the \geq 0.5 test

⊕ 0 Upvotes



Pieter Nel · 2 months ago

That can't be right if you consider that Y_prediction should be 0 for all values <=0.5 0.5 itself should be translate to a 0, not a 1 as per your example.

⊕ 0 Upvotes



Philippe Stessel · 2 months ago

Yes, I think this nice bit of code should be 1 * (A > 0.5) to conform to assignment.

↑ 1 Upvote



Paul T Mielke Mentor · 2 months ago

@Philippe: That's a good point! Dunno if the grader is subtle enough to catch that boundary case, but better safe than sorry;^) ...

For what it's worth, I tried the straightforward strategy in *predict* of just using the boolean vector expression directly and the grader accepted it. The equivalent of:

v = (A > 0.5)

The result is boolean values, but the grader is fine with that, even though it no longer exactly matches the "expected output" shown in the notebook.



Philippe Stessel · 2 months ago

@Paul: Even simpler!

û 0 Upvotes

ZZ

Reply

Reply

MV

Michael Vigoda · 2 months ago

np.where is also a possibility, as Peter mentioned

>>> a = np.array([[12, 4, 3, 9, 10]]) >>> a array([[12, 4, 3, 9, 10]]) >>> np.where(a>4,1,0) array([[1, 0, 0, 1, 1]])

| | ☆ 3 Upvotes ☐ Reply | |
|-----|---|-------------|
| 3 | Lum Ramabaja · 2 months ago | • |
| | you can also use np.vectorize in combination with python's lambda expression. | |
| | û 0 Upvotes | |
| | Gustavo Monge · 2 months ago · Edited | ~ |
| | Thanks. Very good tip! | |
| | Why np.int instead of just int? | |
| | i.e. print((vec > 1).astype(int)) | |
| | û Upvotes ☐ Reply | |
| PS | Peter Shook · 2 months ago | • |
| 13 | see np.where | |
| | ↑ 0 Upvotes | |
| VK | Vikram Kalabi · 2 months ago · Edited | • |
| ••• | Trick is to treat the vector/matrix as if it were scalar. Please see following links for clarity. | |
| | Vector/Matrix - Scalar comparison | |
| | Typecasting boolean array | |
| | Here is a sample code: | |
| | <pre>1 vec = np.random.randn(5) 2 print(vec)</pre> | |
| | <pre>3 print(vec > 1) 4 print((vec > 1).astype(np.int))</pre> | |
| | Output: | |
| | [1.05725876 0.51886838 1.39668718 0.17516998 1.61066233] | |
| | [True False True False True] | |
| | [1 0 1 0 1] | |
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