Softmax

CLASS torch.nn.Softmax(*dim=None*) [SOURCE]

Applies the Softmax function to an n-dimensional input Tensor.

Rescales them so that the elements of the n-dimensional output Tensor lie in the range [0,1] and sum to 1.

Softmax is defined as:

$$\text{Softmax}(x_i) = \frac{\exp(x_i)}{\sum_j \exp(x_j)}$$

When the input Tensor is a sparse tensor then the unspecified values are treated as `-inf`.

Shape:

- Input: $(*)$ where * means, any number of additional dimensions
- Output: $(*)$, same shape as the input

Returns

a Tensor of the same dimension and shape as the input with values in the range [0, 1]

Parameters

dim (*int*) – A dimension along which Softmax will be computed (so every slice along dim will sum to 1).

Return type

None

• NOTE

This module doesn't work directly with NLLLoss, which expects the Log to be computed between the Softmax and itself. Use *LogSoftmax* instead (it's faster and has better numerical properties).

Examples:

```
>>> m = nn.Softmax(dim=1)
>>> input = torch.randn(2, 3)
>>> output = m(input)
```

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