

tf.keras.constraints.MinMaxNorm

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Class **MinMaxNorm**

Inherits From: [Constraint](#)

Aliases:

- Class `tf.keras.constraints.MinMaxNorm`
- Class `tf.keras.constraints.min_max_norm`

Defined in [tensorflow/python/keras/_impl/keras/constraints.py](#).

MinMaxNorm weight constraint.

Constrains the weights incident to each hidden unit to have the norm between a lower bound and an upper bound.

Arguments:

- `min_value`: the minimum norm for the incoming weights.
- `max_value`: the maximum norm for the incoming weights.
- `rate`: rate for enforcing the constraint: weights will be rescaled to yield $(1 - \text{rate}) * \text{norm} + \text{rate} * \text{norm.clip}(\text{min_value}, \text{max_value})$. Effectively, this means that `rate=1.0` stands for strict enforcement of the constraint, while `rate<1.0` means that weights will be rescaled at each step to slowly move towards a value inside the desired interval.
- `axis`: integer, axis along which to calculate weight norms. For instance, in a `Dense` layer the weight matrix has shape `(input_dim, output_dim)`, set `axis` to `0` to constrain each weight vector of length `(input_dim,)`. In a `Conv2D` layer with `dim_ordering="channels_last"`, the weight tensor has shape `(rows, cols, input_depth, output_depth)`, set `axis` to `[0, 1, 2]` to constrain the weights of each filter tensor of size `(rows, cols, input_depth)`.

Methods

`__init__`

```
__init__(
    min_value=0.0,
    max_value=1.0,
    rate=1.0,
    axis=0
)
```

__call__

```
__call__(w)
```

get_config

```
get_config()
```

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