tf.keras.optimizers.SGD

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Class **SGD**

Inherits From: `Optimizer`

Defined in `tensorflow/python/keras/_impl/keras/optimizers.py`.

Stochastic gradient descent optimizer.

Includes support for momentum, learning rate decay, and Nesterov momentum.

Arguments:

- `lr`: float >= 0. Learning rate.
- `momentum`: float >= 0. Parameter updates momentum.
- `decay`: float >= 0. Learning rate decay over each update.
- `nesterov`: boolean. Whether to apply Nesterov momentum.

Methods

`__init__`

```
__init__(
    lr=0.01,
    momentum=0.0,
    decay=0.0,
    nesterov=False,
    **kwargs
)
```

`from_config`

```
from_config(
    cls,
    config
)
```

get_config

```
get_config()
```

get_gradients

```
get_gradients(
    loss,
    params
)
```

get_updates

```
get_updates(
    loss,
    params
)
```

get_weights

```
get_weights()
```

Returns the current value of the weights of the optimizer.

Returns:

A list of numpy arrays.

set_weights

```
set_weights(weights)
```

Sets the weights of the optimizer, from Numpy arrays.

Should only be called after computing the gradients (otherwise the optimizer has no weights).

Arguments:

- `weights`: a list of Numpy arrays. The number of arrays and their shape must match number of the dimensions of the weights of the optimizer (i.e. it should match the output of `get_weights`).

Raises:

- `ValueError`: in case of incompatible weight shapes.

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