tf.keras.optimizers.Adam

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Class **Adam**

Inherits From: `Optimizer`

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

Adam optimizer.

Default parameters follow those provided in the original paper.

Arguments:

- `lr` : float >= 0. Learning rate.
- `beta_1` : float, 0 < beta < 1. Generally close to 1.
- `beta_2` : float, 0 < beta < 1. Generally close to 1.
- `epsilon` : float >= 0. Fuzz factor.
- `decay` : float >= 0. Learning rate decay over each update.

References: - Adam - A Method for Stochastic Optimization

Methods

`__init__`

```
__init__(
    lr=0.001,
    beta_1=0.9,
    beta_2=0.999,
    epsilon=1e-08,
    decay=0.0,
    **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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