tf.RegisterGradient

Contents

Class `RegisterGradient`

Defined in `tensorflow/python/framework/ops.py`.

See the guide: Building Graphs > Defining new operations

A decorator for registering the gradient function for an op type.

This decorator is only used when defining a new op type. For an op with `m` inputs and `n` outputs, the gradient function is a function that takes the original `Operation` and `n` `Tensor` objects (representing the gradients with respect to each output of the op), and returns `m` `Tensor` objects (representing the partial gradients with respect to each input of the op).

For example, assuming that operations of type `"Sub"` take two inputs `x` and `y`, and return a single output `x - y`, the following gradient function would be registered:

```
@tf.RegisterGradient("Sub")
def _sub_grad(unused_op, grad):
  return grad, tf.negative(grad)
```

The decorator argument `op_type` is the string type of an operation. This corresponds to the `OpDef.name` field for the proto that defines the operation.

Methods

`__init__`

```
__init__(op_type)
```

Creates a new decorator with `op_type` as the Operation type.

Args:

- `op_type`: The string type of an operation. This corresponds to the `OpDef.name` field for the proto that defines the operation.

`__call__`

```
__call__(f)
```

Registers the function `f` as gradient function for `op_type`.

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