Module: tf

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TensorFlow 1 version (/versions/r1.15/api_docs/python/tf)   View source on GitHub (https://github.com/tensorflow/tensorflow/blob/v2.4.1/tensorf

TensorFlow

```
pip install tensorflow
```

Modules

audio (https://www.tensorflow.org/api_docs/python/tf/audio) module: Public API for tf.audio namespace.

autodiff (https://www.tensorflow.org/api_docs/python/tf/autodiff) module: Public API for tf.autodiff namespace.

autograph (https://www.tensorflow.org/api_docs/python/tf/autograph) module: Conversion of plain Python into TensorFlow graph code.

bitwise (https://www.tensorflow.org/api_docs/python/tf/bitwise) module: Operations for manipulating the binary representations of integers.

compat (https://www.tensorflow.org/api_docs/python/tf/compat) module: Compatibility functions.

config (https://www.tensorflow.org/api_docs/python/tf/config) module: Public API for tf.config namespace.

data (https://www.tensorflow.org/api_docs/python/tf/data) module: `tf.data.Dataset` (https://www.tensorflow.org/api_docs/python/tf/data/Dataset) API for input pipelines.

debugging (https://www.tensorflow.org/api_docs/python/tf/debugging) module: Public API for tf.debugging namespace.

distribute (https://www.tensorflow.org/api_docs/python/tf/distribute) module: Library for running a computation across multiple devices.

dtypes (https://www.tensorflow.org/api_docs/python/tf/dtypes) module: Public API for tf.dtypes namespace.

errors (https://www.tensorflow.org/api_docs/python/tf/errors) module: Exception types for TensorFlow errors.

estimator (https://www.tensorflow.org/api_docs/python/tf/estimator) module: Estimator: High level tools for working with models.

experimental (https://www.tensorflow.org/api_docs/python/tf/experimental) module: Public API for tf.experimental namespace.

feature_column (https://www.tensorflow.org/api_docs/python/tf/feature_column) module: Public API for tf.feature_column namespace.

graph_util (https://www.tensorflow.org/api_docs/python/tf/graph_util) module: Helpers to manipulate a tensor graph in python.

image (https://www.tensorflow.org/api_docs/python/tf/image) module: Image ops.

initializers (https://www.tensorflow.org/api_docs/python/tf/keras/initializers) module: Keras initializer serialization / deserialization.

io (https://www.tensorflow.org/api_docs/python/tf/io) module: Public API for tf.io namespace.

keras (https://www.tensorflow.org/api_docs/python/tf/keras) module: Implementation of the Keras API meant to be a high-level API for TensorFlow.

linalg (https://www.tensorflow.org/api_docs/python/tf/linalg) module: Operations for linear algebra.

lite (https://www.tensorflow.org/api_docs/python/tf/lite) module: Public API for tf.lite namespace.

lookup (https://www.tensorflow.org/api_docs/python/tf/lookup) module: Public API for tf.lookup namespace.

losses (https://www.tensorflow.org/api_docs/python/tf/keras/losses) module: Built-in loss functions.

math (https://www.tensorflow.org/api_docs/python/tf/math) module: Math Operations.

metrics (https://www.tensorflow.org/api_docs/python/tf/keras/metrics) module: Built-in metrics.

mixed_precision (https://www.tensorflow.org/api_docs/python/tf/mixed_precision) module: Public API for tf.mixed_precision namespace.

mlir (https://www.tensorflow.org/api_docs/python/tf/mlir) module: Public API for tf.mlir namespace.

nest (https://www.tensorflow.org/api_docs/python/tf/nest) module: Public API for tf.nest namespace.

nn (https://www.tensorflow.org/api_docs/python/tf/nn) module: Wrappers for primitive Neural Net (NN) Operations.

optimizers (https://www.tensorflow.org/api_docs/python/tf/keras/optimizers) module: Built-in optimizer classes.

profiler (https://www.tensorflow.org/api_docs/python/tf/profiler) module: Public API for tf.profiler namespace.

quantization (https://www.tensorflow.org/api_docs/python/tf/quantization) module: Public API for tf.quantization namespace.

queue (https://www.tensorflow.org/api_docs/python/tf/queue) module: Public API for tf.queue namespace.

`ragged` (https://www.tensorflow.org/api_docs/python/tf/ragged) module: Ragged Tensors.

`random` (https://www.tensorflow.org/api_docs/python/tf/random) module: Public API for tf.random namespace.

`raw_ops` (https://www.tensorflow.org/api_docs/python/tf/raw_ops) module: Public API for tf.raw_ops namespace.

`saved_model` (https://www.tensorflow.org/api_docs/python/tf/saved_model) module: Public API for tf.saved_model namespace.

`sets` (https://www.tensorflow.org/api_docs/python/tf/sets) module: Tensorflow set operations.

`signal` (https://www.tensorflow.org/api_docs/python/tf/signal) module: Signal processing operations.

`sparse` (https://www.tensorflow.org/api_docs/python/tf/sparse) module: Sparse Tensor Representation.

`strings` (https://www.tensorflow.org/api_docs/python/tf/strings) module: Operations for working with string Tensors.

`summary` (https://www.tensorflow.org/api_docs/python/tf/summary) module: Operations for writing summary data, for use in analysis and visualization.

`sysconfig` (https://www.tensorflow.org/api_docs/python/tf/sysconfig) module: System configuration library.

`test` (https://www.tensorflow.org/api_docs/python/tf/test) module: Testing.

`tpu` (https://www.tensorflow.org/api_docs/python/tf/tpu) module: Ops related to Tensor Processing Units.

`train` (https://www.tensorflow.org/api_docs/python/tf/train) module: Support for training models.

`types` (https://www.tensorflow.org/api_docs/python/tf/types) module: Public TensorFlow type definitions.

`version` (https://www.tensorflow.org/api_docs/python/tf/version) module: Public API for tf.version namespace.

`xla` (https://www.tensorflow.org/api_docs/python/tf/xla) module: Public API for tf.xla namespace.

Classes

`class AggregationMethod` (https://www.tensorflow.org/api_docs/python/tf/AggregationMethod): A class listing aggregation methods used to combine gradients.

`class CriticalSection` (https://www.tensorflow.org/api_docs/python/tf/CriticalSection): Critical section.

`class DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType): Represents the type of the elements in a Tensor.

`class DeviceSpec` (https://www.tensorflow.org/api_docs/python/tf/DeviceSpec): Represents a (possibly partial) specification for a TensorFlow device.

`class GradientTape` (https://www.tensorflow.org/api_docs/python/tf/GradientTape): Record operations for automatic differentiation.

`class Graph` (https://www.tensorflow.org/api_docs/python/tf/Graph): A TensorFlow computation, represented as a dataflow graph.

class IndexedSlices (https://www.tensorflow.org/api_docs/python/tf/IndexedSlices): A sparse representation of a set of tensor slices at given indices.

class IndexedSlicesSpec (https://www.tensorflow.org/api_docs/python/tf/IndexedSlicesSpec): Type specification for a **tf.IndexedSlices** (https://www.tensorflow.org/api_docs/python/tf/IndexedSlices).

class Module (https://www.tensorflow.org/api_docs/python/tf/Module): Base neural network module class.

class Operation (https://www.tensorflow.org/api_docs/python/tf/Operation): Represents a graph node that performs computation on tensors.

class OptionalSpec (https://www.tensorflow.org/api_docs/python/tf/OptionalSpec): Type specification for **tf.experimental.Optional** (https://www.tensorflow.org/api_docs/python/tf/experimental/Optional).

class RaggedTensor (https://www.tensorflow.org/api_docs/python/tf/RaggedTensor): Represents a ragged tensor.

class RaggedTensorSpec (https://www.tensorflow.org/api_docs/python/tf/RaggedTensorSpec): Type specification for a **tf.RaggedTensor** (https://www.tensorflow.org/api_docs/python/tf/RaggedTensor).

class RegisterGradient (https://www.tensorflow.org/api_docs/python/tf/RegisterGradient): A decorator for registering the gradient function for an op type.

class SparseTensor (https://www.tensorflow.org/api_docs/python/tf/sparse/SparseTensor): Represents a sparse tensor.

class SparseTensorSpec (https://www.tensorflow.org/api_docs/python/tf/SparseTensorSpec): Type specification for a **tf.sparse.SparseTensor** (https://www.tensorflow.org/api_docs/python/tf/sparse/SparseTensor).

class Tensor (https://www.tensorflow.org/api_docs/python/tf/Tensor): A tensor is a multidimensional array of elements represented by a

class TensorArray (https://www.tensorflow.org/api_docs/python/tf/TensorArray): Class wrapping dynamic-sized, per-time-step, write-once Tensor arrays.

class TensorArraySpec (https://www.tensorflow.org/api_docs/python/tf/TensorArraySpec): Type specification for a **tf.TensorArray** (https://www.tensorflow.org/api_docs/python/tf/TensorArray).

class TensorShape (https://www.tensorflow.org/api_docs/python/tf/TensorShape): Represents the shape of a **Tensor**.

class TensorSpec (https://www.tensorflow.org/api_docs/python/tf/TensorSpec): Describes a tf.Tensor.

class TypeSpec (https://www.tensorflow.org/api_docs/python/tf/TypeSpec): Specifies a TensorFlow value type.

class UnconnectedGradients (https://www.tensorflow.org/api_docs/python/tf/UnconnectedGradients): Controls how gradient computation behaves when y does not depend on x.

class Variable (https://www.tensorflow.org/api_docs/python/tf/Variable): See the variable guide (https://tensorflow.org/guide/variable).

class VariableAggregation (https://www.tensorflow.org/api_docs/python/tf/VariableAggregation): Indicates how a distributed variable will be aggregated.

`class VariableSynchronization` (https://www.tensorflow.org/api_docs/python/tf/VariableSynchronization): Indicates when a distributed variable will be synced.

`class constant_initializer` (https://www.tensorflow.org/api_docs/python/tf/constant_initializer): Initializer that generates tensors with constant values.

`class name_scope` (https://www.tensorflow.org/api_docs/python/tf/name_scope): A context manager for use when defining a Python op.

`class ones_initializer` (https://www.tensorflow.org/api_docs/python/tf/ones_initializer): Initializer that generates tensors initialized to 1.

`class random_normal_initializer` (https://www.tensorflow.org/api_docs/python/tf/random_normal_initializer): Initializer that generates tensors with a normal distribution.

`class random_uniform_initializer` (https://www.tensorflow.org/api_docs/python/tf/random_uniform_initializer): Initializer that generates tensors with a uniform distribution.

`class zeros_initializer` (https://www.tensorflow.org/api_docs/python/tf/zeros_initializer): Initializer that generates tensors initialized to 0.

Functions

`Assert(...)` (https://www.tensorflow.org/api_docs/python/tf/debugging/Assert): Asserts that the given condition is true.

`abs(...)` (https://www.tensorflow.org/api_docs/python/tf/math/abs): Computes the absolute value of a tensor.

`acos(...)` (https://www.tensorflow.org/api_docs/python/tf/math/acos): Computes acos of x element-wise.

`acosh(...)` (https://www.tensorflow.org/api_docs/python/tf/math/acosh): Computes inverse hyperbolic cosine of x element-wise.

`add(...)` (https://www.tensorflow.org/api_docs/python/tf/math/add): Returns x + y element-wise.

`add_n(...)` (https://www.tensorflow.org/api_docs/python/tf/math/add_n): Adds all input tensors element-wise.

`argmax(...)` (https://www.tensorflow.org/api_docs/python/tf/math/argmax): Returns the index with the largest value across axes of a tensor.

`argmin(...)` (https://www.tensorflow.org/api_docs/python/tf/math/argmin): Returns the index with the smallest value across axes of a tensor.

`argsort(...)` (https://www.tensorflow.org/api_docs/python/tf/argsort): Returns the indices of a tensor that give its sorted order along an axis.

`as_dtype(...)` (https://www.tensorflow.org/api_docs/python/tf/dtypes/as_dtype): Converts the given `type_value` to a DType.

as_string(...) (https://www.tensorflow.org/api_docs/python/tf/strings/as_string): Converts each entry in the given tensor to strings.

asin(...) (https://www.tensorflow.org/api_docs/python/tf/math/asin): Computes the trignometric inverse sine of x element-wise.

asinh(...) (https://www.tensorflow.org/api_docs/python/tf/math/asinh): Computes inverse hyperbolic sine of x element-wise.

assert_equal(...) (https://www.tensorflow.org/api_docs/python/tf/debugging/assert_equal): Assert the condition x == y holds element-wise.

assert_greater(...) (https://www.tensorflow.org/api_docs/python/tf/debugging/assert_greater): Assert the condition x > y holds element-wise.

assert_less(...) (https://www.tensorflow.org/api_docs/python/tf/debugging/assert_less): Assert the condition x < y holds element-wise.

assert_rank(...) (https://www.tensorflow.org/api_docs/python/tf/debugging/assert_rank): Assert that x has rank equal to rank.

atan(...) (https://www.tensorflow.org/api_docs/python/tf/math/atan): Computes the trignometric inverse tangent of x element-wise.

atan2(...) (https://www.tensorflow.org/api_docs/python/tf/math/atan2): Computes arctangent of y/x element-wise, respecting signs of the arguments.

atanh(...) (https://www.tensorflow.org/api_docs/python/tf/math/atanh): Computes inverse hyperbolic tangent of x element-wise.

batch_to_space(...) (https://www.tensorflow.org/api_docs/python/tf/batch_to_space): BatchToSpace for N-D tensors of type T.

bitcast(...) (https://www.tensorflow.org/api_docs/python/tf/bitcast): Bitcasts a tensor from one type to another without copying data.

boolean_mask(...) (https://www.tensorflow.org/api_docs/python/tf/boolean_mask): Apply boolean mask to tensor.

broadcast_dynamic_shape(...) (https://www.tensorflow.org/api_docs/python/tf/broadcast_dynamic_shape): Computes the shape of a broadcast given symbolic shapes.

broadcast_static_shape(...) (https://www.tensorflow.org/api_docs/python/tf/broadcast_static_shape): Computes the shape of a broadcast given known shapes.

broadcast_to(...) (https://www.tensorflow.org/api_docs/python/tf/broadcast_to): Broadcast an array for a compatible shape.

case(...) (https://www.tensorflow.org/api_docs/python/tf/case): Create a case operation.

cast(...) (https://www.tensorflow.org/api_docs/python/tf/cast): Casts a tensor to a new type.

`clip_by_global_norm(...)` (https://www.tensorflow.org/api_docs/python/tf/clip_by_global_norm): Clips values of multiple tensors by the ratio of the sum of their norms.

`clip_by_norm(...)` (https://www.tensorflow.org/api_docs/python/tf/clip_by_norm): Clips tensor values to a maximum L2-norm.

`clip_by_value(...)` (https://www.tensorflow.org/api_docs/python/tf/clip_by_value): Clips tensor values to a specified min and max.

`complex(...)` (https://www.tensorflow.org/api_docs/python/tf/dtypes/complex): Converts two real numbers to a complex number.

`concat(...)` (https://www.tensorflow.org/api_docs/python/tf/concat): Concatenates tensors along one dimension.

`cond(...)` (https://www.tensorflow.org/api_docs/python/tf/cond): Return `true_fn()` if the predicate `pred` is true else `false_fn()`.

`constant(...)` (https://www.tensorflow.org/api_docs/python/tf/constant): Creates a constant tensor from a tensor-like object.

`control_dependencies(...)` (https://www.tensorflow.org/api_docs/python/tf/control_dependencies): Wrapper for `Graph.control_dependencies()` (https://www.tensorflow.org/api_docs/python/tf/Graph#control_dependencies) using the default graph.

`convert_to_tensor(...)` (https://www.tensorflow.org/api_docs/python/tf/convert_to_tensor): Converts the given `value` to a `Tensor`.

`cos(...)` (https://www.tensorflow.org/api_docs/python/tf/math/cos): Computes cos of x element-wise.

`cosh(...)` (https://www.tensorflow.org/api_docs/python/tf/math/cosh): Computes hyperbolic cosine of x element-wise.

`cumsum(...)` (https://www.tensorflow.org/api_docs/python/tf/math/cumsum): Compute the cumulative sum of the tensor `x` along `axis`.

`custom_gradient(...)` (https://www.tensorflow.org/api_docs/python/tf/custom_gradient): Decorator to define a function with a custom gradient.

`device(...)` (https://www.tensorflow.org/api_docs/python/tf/device): Specifies the device for ops created/executed in this context.

`divide(...)` (https://www.tensorflow.org/api_docs/python/tf/math/divide): Computes Python style division of `x` by `y`.

`dynamic_partition(...)` (https://www.tensorflow.org/api_docs/python/tf/dynamic_partition): Partitions `data` into `num_partitions` tensors using indices from `partitions`.

`dynamic_stitch(...)` (https://www.tensorflow.org/api_docs/python/tf/dynamic_stitch): Interleave the values from the `data` tensors into a single tensor.

`edit_distance(...)` (https://www.tensorflow.org/api_docs/python/tf/edit_distance): Computes the Levenshtein distance between sequences.

eig(...) (https://www.tensorflow.org/api_docs/python/tf/linalg/eig): Computes the eigen decomposition of a batch of matrices.

eigvals(...) (https://www.tensorflow.org/api_docs/python/tf/linalg/eigvals): Computes the eigenvalues of one or more matrices.

einsum(...) (https://www.tensorflow.org/api_docs/python/tf/einsum): Tensor contraction over specified indices and outer product.

ensure_shape(...) (https://www.tensorflow.org/api_docs/python/tf/ensure_shape): Updates the shape of a tensor and checks at runtime that the shape holds.

equal(...) (https://www.tensorflow.org/api_docs/python/tf/math/equal): Returns the truth value of (x == y) element-wise.

executing_eagerly(...) (https://www.tensorflow.org/api_docs/python/tf/executing_eagerly): Checks whether the current thread has eager execution enabled.

exp(...) (https://www.tensorflow.org/api_docs/python/tf/math/exp): Computes exponential of x element-wise. $y = e^x$.

expand_dims(...) (https://www.tensorflow.org/api_docs/python/tf/expand_dims): Returns a tensor with a length 1 axis inserted at index `axis`.

extract_volume_patches(...) (https://www.tensorflow.org/api_docs/python/tf/extract_volume_patches): Extract `patches` from `input` and put them in the `"depth"` output dimension. 3D extension of `extract_image_patches`.

eye(...) (https://www.tensorflow.org/api_docs/python/tf/eye): Construct an identity matrix, or a batch of matrices.

fill(...) (https://www.tensorflow.org/api_docs/python/tf/fill): Creates a tensor filled with a scalar value.

fingerprint(...) (https://www.tensorflow.org/api_docs/python/tf/fingerprint): Generates fingerprint values.

floor(...) (https://www.tensorflow.org/api_docs/python/tf/math/floor): Returns element-wise largest integer not greater than x.

foldl(...) (https://www.tensorflow.org/api_docs/python/tf/foldl): foldl on the list of tensors unpacked from `elems` on dimension 0. (deprecated argument values)

foldr(...) (https://www.tensorflow.org/api_docs/python/tf/foldr): foldr on the list of tensors unpacked from `elems` on dimension 0. (deprecated argument values)

function(...) (https://www.tensorflow.org/api_docs/python/tf/function): Compiles a function into a callable TensorFlow graph.

gather(...) (https://www.tensorflow.org/api_docs/python/tf/gather): Gather slices from params axis `axis` according to indices.

gather_nd(...) (https://www.tensorflow.org/api_docs/python/tf/gather_nd): Gather slices from `params` into a Tensor with shape specified by `indices`.

get_logger(...) (https://www.tensorflow.org/api_docs/python/tf/get_logger): Return TF logger instance.

`get_static_value(...)` (https://www.tensorflow.org/api_docs/python/tf/get_static_value): Returns the constant value of the given tensor, if efficiently calculable.

`grad_pass_through(...)` (https://www.tensorflow.org/api_docs/python/tf/grad_pass_through): Creates a grad-pass-through op with the forward behavior provided in f.

`gradients(...)` (https://www.tensorflow.org/api_docs/python/tf/gradients): Constructs symbolic derivatives of sum of ys w.r.t. x in xs.

`greater(...)` (https://www.tensorflow.org/api_docs/python/tf/math/greater): Returns the truth value of (x > y) element-wise.

`greater_equal(...)` (https://www.tensorflow.org/api_docs/python/tf/math/greater_equal): Returns the truth value of (x >= y) element-wise.

`group(...)` (https://www.tensorflow.org/api_docs/python/tf/group): Create an op that groups multiple operations.

`guarantee_const(...)` (https://www.tensorflow.org/api_docs/python/tf/guarantee_const): Gives a guarantee to the TF runtime that the input tensor is a constant.

`hessians(...)` (https://www.tensorflow.org/api_docs/python/tf/hessians): Constructs the Hessian of sum of ys with respect to x in xs.

`histogram_fixed_width(...)` (https://www.tensorflow.org/api_docs/python/tf/histogram_fixed_width): Return histogram of values.

`histogram_fixed_width_bins(...)` (https://www.tensorflow.org/api_docs/python/tf/histogram_fixed_width_bins): Bins the given values for use in a histogram.

`identity(...)` (https://www.tensorflow.org/api_docs/python/tf/identity): Return a Tensor with the same shape and contents as input.

`identity_n(...)` (https://www.tensorflow.org/api_docs/python/tf/identity_n): Returns a list of tensors with the same shapes and contents as the input

`import_graph_def(...)` (https://www.tensorflow.org/api_docs/python/tf/graph_util/import_graph_def): Imports the graph from `graph_def` into the current default `Graph`. (deprecated arguments)

`init_scope(...)` (https://www.tensorflow.org/api_docs/python/tf/init_scope): A context manager that lifts ops out of control-flow scopes and function-building graphs.

`inside_function(...)` (https://www.tensorflow.org/api_docs/python/tf/inside_function): Indicates whether the caller code is executing inside a `tf.function` (https://www.tensorflow.org/api_docs/python/tf/function).

`is_tensor(...)` (https://www.tensorflow.org/api_docs/python/tf/is_tensor): Checks whether x is a TF-native type that can be passed to many TF ops.

`less(...)` (https://www.tensorflow.org/api_docs/python/tf/math/less): Returns the truth value of (x < y) element-wise.

`less_equal(...)` (https://www.tensorflow.org/api_docs/python/tf/math/less_equal): Returns the truth value of (x <= y) element-wise.

`linspace(...)` (https://www.tensorflow.org/api_docs/python/tf/linspace): Generates evenly-spaced values in an interval along a given axis.

`load_library(...)` (https://www.tensorflow.org/api_docs/python/tf/load_library): Loads a TensorFlow plugin.

`load_op_library(...)` (https://www.tensorflow.org/api_docs/python/tf/load_op_library): Loads a TensorFlow plugin, containing custom ops and kernels.

`logical_and(...)` (https://www.tensorflow.org/api_docs/python/tf/math/logical_and): Logical AND function.

`logical_not(...)` (https://www.tensorflow.org/api_docs/python/tf/math/logical_not): Returns the truth value of `NOT x` element-wise.

`logical_or(...)` (https://www.tensorflow.org/api_docs/python/tf/math/logical_or): Returns the truth value of x OR y element-wise.

`make_ndarray(...)` (https://www.tensorflow.org/api_docs/python/tf/make_ndarray): Create a numpy ndarray from a tensor.

`make_tensor_proto(...)` (https://www.tensorflow.org/api_docs/python/tf/make_tensor_proto): Create a TensorProto.

`map_fn(...)` (https://www.tensorflow.org/api_docs/python/tf/map_fn): Transforms `elems` by applying `fn` to each element unstacked on axis 0. (deprecated arguments)

`matmul(...)` (https://www.tensorflow.org/api_docs/python/tf/linalg/matmul): Multiplies matrix `a` by matrix `b`, producing a * b.

`matrix_square_root(...)` (https://www.tensorflow.org/api_docs/python/tf/linalg/sqrtm): Computes the matrix square root of one or more square matrices:

`maximum(...)` (https://www.tensorflow.org/api_docs/python/tf/math/maximum): Returns the max of x and y (i.e. x > y ? x : y) element-wise.

`meshgrid(...)` (https://www.tensorflow.org/api_docs/python/tf/meshgrid): Broadcasts parameters for evaluation on an N-D grid.

`minimum(...)` (https://www.tensorflow.org/api_docs/python/tf/math/minimum): Returns the min of x and y (i.e. x < y ? x : y) element-wise.

`multiply(...)` (https://www.tensorflow.org/api_docs/python/tf/math/multiply): Returns an element-wise x * y.

`negative(...)` (https://www.tensorflow.org/api_docs/python/tf/math/negative): Computes numerical negative value element-wise.

`no_gradient(...)` (https://www.tensorflow.org/api_docs/python/tf/no_gradient): Specifies that ops of type `op_type` is not differentiable.

`no_op(...)` (https://www.tensorflow.org/api_docs/python/tf/no_op): Does nothing. Only useful as a placeholder for control edges.

`nondifferentiable_batch_function(...)` (https://www.tensorflow.org/api_docs/python/tf/nondifferentiable_batch_function): Batches the computation done by the

decorated function.

norm(...) (https://www.tensorflow.org/api_docs/python/tf/norm): Computes the norm of vectors, matrices, and tensors.

not_equal(...) (https://www.tensorflow.org/api_docs/python/tf/math/not_equal): Returns the truth value of (x != y) element-wise.

numpy_function(...) (https://www.tensorflow.org/api_docs/python/tf/numpy_function): Wraps a python function and uses it as a TensorFlow op.

one_hot(...) (https://www.tensorflow.org/api_docs/python/tf/one_hot): Returns a one-hot tensor.

ones(...) (https://www.tensorflow.org/api_docs/python/tf/ones): Creates a tensor with all elements set to one (1).

ones_like(...) (https://www.tensorflow.org/api_docs/python/tf/ones_like): Creates a tensor of all ones that has the same shape as the input.

pad(...) (https://www.tensorflow.org/api_docs/python/tf/pad): Pads a tensor.

parallel_stack(...) (https://www.tensorflow.org/api_docs/python/tf/parallel_stack): Stacks a list of rank-R tensors into one rank-(R+1) tensor in parallel.

pow(...) (https://www.tensorflow.org/api_docs/python/tf/math/pow): Computes the power of one value to another.

print(...) (https://www.tensorflow.org/api_docs/python/tf/print): Print the specified inputs.

py_function(...) (https://www.tensorflow.org/api_docs/python/tf/py_function): Wraps a python function into a TensorFlow op that executes it eagerly.

quantize_and_dequantize_v4(...) (https://www.tensorflow.org/api_docs/python/tf/quantize_and_dequantize_v4): Returns the gradient of QuantizeAndDequantizeV4.

range(...) (https://www.tensorflow.org/api_docs/python/tf/range): Creates a sequence of numbers.

rank(...) (https://www.tensorflow.org/api_docs/python/tf/rank): Returns the rank of a tensor.

realdiv(...) (https://www.tensorflow.org/api_docs/python/tf/realdiv): Returns x / y element-wise for real types.

recompute_grad(...) (https://www.tensorflow.org/api_docs/python/tf/recompute_grad): An eager-compatible version of recompute_grad.

reduce_all(...) (https://www.tensorflow.org/api_docs/python/tf/math/reduce_all): Computes the "logical and" of elements across dimensions of a tensor.

reduce_any(...) (https://www.tensorflow.org/api_docs/python/tf/math/reduce_any): Computes the "logical or" of elements across dimensions of a tensor.

reduce_logsumexp(...) (https://www.tensorflow.org/api_docs/python/tf/math/reduce_logsumexp): Computes log(sum(exp(elements across dimensions of a tensor))).

reduce_max(...) (https://www.tensorflow.org/api_docs/python/tf/math/reduce_max): Computes the maximum of elements across dimensions of a tensor.

`reduce_mean(...)` (https://www.tensorflow.org/api_docs/python/tf/math/reduce_mean): Computes the mean of elements across dimensions of a tensor.

`reduce_min(...)` (https://www.tensorflow.org/api_docs/python/tf/math/reduce_min): Computes the minimum of elements across dimensions of a tensor.

`reduce_prod(...)` (https://www.tensorflow.org/api_docs/python/tf/math/reduce_prod): Computes the product of elements across dimensions of a tensor.

`reduce_sum(...)` (https://www.tensorflow.org/api_docs/python/tf/math/reduce_sum): Computes the sum of elements across dimensions of a tensor.

`register_tensor_conversion_function(...)` (https://www.tensorflow.org/api_docs/python/tf/register_tensor_conversion_function): Registers a function for converting objects of `base_type` to `Tensor`.

`repeat(...)` (https://www.tensorflow.org/api_docs/python/tf/repeat): Repeat elements of `input`.

`required_space_to_batch_paddings(...)` (https://www.tensorflow.org/api_docs/python/tf/required_space_to_batch_paddings): Calculate padding required to make block_shape divide input_shape.

`reshape(...)` (https://www.tensorflow.org/api_docs/python/tf/reshape): Reshapes a tensor.

`reverse(...)` (https://www.tensorflow.org/api_docs/python/tf/reverse): Reverses specific dimensions of a tensor.

`reverse_sequence(...)` (https://www.tensorflow.org/api_docs/python/tf/reverse_sequence): Reverses variable length slices.

`roll(...)` (https://www.tensorflow.org/api_docs/python/tf/roll): Rolls the elements of a tensor along an axis.

`round(...)` (https://www.tensorflow.org/api_docs/python/tf/math/round): Rounds the values of a tensor to the nearest integer, element-wise.

`saturate_cast(...)` (https://www.tensorflow.org/api_docs/python/tf/dtypes/saturate_cast): Performs a safe saturating cast of `value` to `dtype`.

`scalar_mul(...)` (https://www.tensorflow.org/api_docs/python/tf/math/scalar_mul): Multiplies a scalar times a `Tensor` or `IndexedSlices` object.

`scan(...)` (https://www.tensorflow.org/api_docs/python/tf/scan): scan on the list of tensors unpacked from `elems` on dimension 0. (deprecated argument values)

`scatter_nd(...)` (https://www.tensorflow.org/api_docs/python/tf/scatter_nd): Scatter `updates` into a new tensor according to `indices`.

`searchsorted(...)` (https://www.tensorflow.org/api_docs/python/tf/searchsorted): Searches input tensor for values on the innermost dimension.

`sequence_mask(...)` (https://www.tensorflow.org/api_docs/python/tf/sequence_mask): Returns a mask tensor representing the first N positions of each cell.

shape(...) (https://www.tensorflow.org/api_docs/python/tf/shape): Returns a tensor containing the shape of the input tensor.

shape_n(...) (https://www.tensorflow.org/api_docs/python/tf/shape_n): Returns shape of tensors.

sigmoid(...) (https://www.tensorflow.org/api_docs/python/tf/math/sigmoid): Computes sigmoid of x element-wise.

sign(...) (https://www.tensorflow.org/api_docs/python/tf/math/sign): Returns an element-wise indication of the sign of a number.

sin(...) (https://www.tensorflow.org/api_docs/python/tf/math/sin): Computes sine of x element-wise.

sinh(...) (https://www.tensorflow.org/api_docs/python/tf/math/sinh): Computes hyperbolic sine of x element-wise.

size(...) (https://www.tensorflow.org/api_docs/python/tf/size): Returns the size of a tensor.

slice(...) (https://www.tensorflow.org/api_docs/python/tf/slice): Extracts a slice from a tensor.

sort(...) (https://www.tensorflow.org/api_docs/python/tf/sort): Sorts a tensor.

space_to_batch(...) (https://www.tensorflow.org/api_docs/python/tf/space_to_batch): SpaceToBatch for N-D tensors of type T.

space_to_batch_nd(...) (https://www.tensorflow.org/api_docs/python/tf/space_to_batch_nd): SpaceToBatch for N-D tensors of type T.

split(...) (https://www.tensorflow.org/api_docs/python/tf/split): Splits a tensor `value` into a list of sub tensors.

sqrt(...) (https://www.tensorflow.org/api_docs/python/tf/math/sqrt): Computes element-wise square root of the input tensor.

square(...) (https://www.tensorflow.org/api_docs/python/tf/math/square): Computes square of x element-wise.

squeeze(...) (https://www.tensorflow.org/api_docs/python/tf/squeeze): Removes dimensions of size 1 from the shape of a tensor.

stack(...) (https://www.tensorflow.org/api_docs/python/tf/stack): Stacks a list of rank-R tensors into one rank-(R+1) tensor.

stop_gradient(...) (https://www.tensorflow.org/api_docs/python/tf/stop_gradient): Stops gradient computation.

strided_slice(...) (https://www.tensorflow.org/api_docs/python/tf/strided_slice): Extracts a strided slice of a tensor (generalized Python array indexing).

subtract(...) (https://www.tensorflow.org/api_docs/python/tf/math/subtract): Returns x - y element-wise.

switch_case(...) (https://www.tensorflow.org/api_docs/python/tf/switch_case): Create a switch/case operation, i.e. an integer-indexed conditional.

tan(...) (https://www.tensorflow.org/api_docs/python/tf/math/tan): Computes tan of x element-wise.

tanh(...) (https://www.tensorflow.org/api_docs/python/tf/math/tanh): Computes hyperbolic tangent of x element-wise.

`tensor_scatter_nd_add(...)` (https://www.tensorflow.org/api_docs/python/tf/tensor_scatter_nd_add): Adds sparse `updates` to an existing tensor according to `indices`.

`tensor_scatter_nd_max(...)` (https://www.tensorflow.org/api_docs/python/tf/tensor_scatter_nd_max)

`tensor_scatter_nd_min(...)` (https://www.tensorflow.org/api_docs/python/tf/tensor_scatter_nd_min)

`tensor_scatter_nd_sub(...)` (https://www.tensorflow.org/api_docs/python/tf/tensor_scatter_nd_sub): Subtracts sparse `updates` from an existing tensor according to `indices`.

`tensor_scatter_nd_update(...)` (https://www.tensorflow.org/api_docs/python/tf/tensor_scatter_nd_update): "Scatter `updates` into an existing tensor according to `indices`.

`tensordot(...)` (https://www.tensorflow.org/api_docs/python/tf/tensordot): Tensor contraction of a and b along specified axes and outer product.

`tile(...)` (https://www.tensorflow.org/api_docs/python/tf/tile): Constructs a tensor by tiling a given tensor.

`timestamp(...)` (https://www.tensorflow.org/api_docs/python/tf/timestamp): Provides the time since epoch in seconds.

`transpose(...)` (https://www.tensorflow.org/api_docs/python/tf/transpose): Transposes a, where a is a Tensor.

`truediv(...)` (https://www.tensorflow.org/api_docs/python/tf/math/truediv): Divides x / y elementwise (using Python 3 division operator semantics).

`truncatediv(...)` (https://www.tensorflow.org/api_docs/python/tf/truncatediv): Returns x / y element-wise for integer types.

`truncatemod(...)` (https://www.tensorflow.org/api_docs/python/tf/truncatemod): Returns element-wise remainder of division. This emulates C semantics in that

`tuple(...)` (https://www.tensorflow.org/api_docs/python/tf/tuple): Group tensors together.

`type_spec_from_value(...)` (https://www.tensorflow.org/api_docs/python/tf/type_spec_from_value): Returns a `tf.TypeSpec` (https://www.tensorflow.org/api_docs/python/tf/TypeSpec) that represents the given `value`.

`unique(...)` (https://www.tensorflow.org/api_docs/python/tf/unique): Finds unique elements in a 1-D tensor.

`unique_with_counts(...)` (https://www.tensorflow.org/api_docs/python/tf/unique_with_counts): Finds unique elements in a 1-D tensor.

`unravel_index(...)` (https://www.tensorflow.org/api_docs/python/tf/unravel_index): Converts an array of flat indices into a tuple of coordinate arrays.

`unstack(...)` (https://www.tensorflow.org/api_docs/python/tf/unstack): Unpacks the given dimension of a rank-`R` tensor into rank-`(R-1)` tensors.

`variable_creator_scope(...)` (https://www.tensorflow.org/api_docs/python/tf/variable_creator_scope): Scope which defines a variable creation function to be used by variable().

`vectorized_map(...)` (https://www.tensorflow.org/api_docs/python/tf/vectorized_map): Parallel map on the list of tensors unpacked from `elems` on dimension 0.

where(...) (https://www.tensorflow.org/api_docs/python/tf/where): Return the elements where `condition` is `True` (multiplexing `x` and `y`).

while_loop(...) (https://www.tensorflow.org/api_docs/python/tf/while_loop): Repeat `body` while the condition `cond` is true. (deprecated argument values)

zeros(...) (https://www.tensorflow.org/api_docs/python/tf/zeros): Creates a tensor with all elements set to zero.

zeros_like(...) (https://www.tensorflow.org/api_docs/python/tf/zeros_like): Creates a tensor with all elements set to zero.

Other Members

version	`'2.4.1'`
bfloat16	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
bool	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
complex128	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
complex64	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
double	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
float16	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
float32	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
float64	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
half	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
int16	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
int32	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
int64	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
int8	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
newaxis	None
qint16	Instance of `tf.dtypes.DType`

qint32	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
qint8	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
quint16	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
quint8	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
resource	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
string	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
uint16	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
uint32	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
uint64	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
uint8	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)
variant	Instance of `tf.dtypes.DType` (https://www.tensorflow.org/api_docs/python/tf/dtypes/DType)

Last updated 2021-04-14 UTC.