TencorFlow

TensorFlow API r1.4

tf.setdiff1d

```
setdiff1d(
    x,
    y,
    index_dtype=tf.int32,
    name=None
)
```

Defined in tensorflow/python/ops/array_ops.py.

See the guides: Math > Sequence Comparison and Indexing, Tensor Transformations > Slicing and Joining

Computes the difference between two lists of numbers or strings.

Given a list \mathbf{x} and a list \mathbf{y} , this operation returns a list \mathbf{out} that represents all values that are in \mathbf{x} but not in \mathbf{y} . The returned list \mathbf{out} is sorted in the same order that the numbers appear in \mathbf{x} (duplicates are preserved). This operation also returns a list \mathbf{idx} that represents the position of each \mathbf{out} element in \mathbf{x} . In other words:

```
out[i] = x[idx[i]] for i in [0, 1, ..., len(out) - 1]
```

For example, given this input:

```
x = [1, 2, 3, 4, 5, 6]

y = [1, 3, 5]
```

This operation would return:

```
out ==> [2, 4, 6]
idx ==> [1, 3, 5]
```

Args:

- x: A Tensor . 1-D. Values to keep.
- y: A **Tensor**. Must have the same type as x. 1-D. Values to remove.
- out_idx: An optional tf.DType from: tf.int32, tf.int64. Defaults to tf.int32.
- name: A name for the operation (optional).

Returns:

A tuple of **Tensor** objects (out, idx).

- out : A Tensor . Has the same type as x . 1-D. Values present in x but not in y .
- idx: A Tensor of type out_idx. 1-D. Positions of x values preserved in out.

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