tf.transpose

```
transpose(
    a,
    perm=None,
    name='transpose'
)
```

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

See the guides: Math > Matrix Math Functions, Tensor Transformations > Slicing and Joining

Transposes `a` . Permutes the dimensions according to `perm` .

The returned tensor's dimension i will correspond to the input dimension `perm[i]` . If `perm` is not given, it is set to (n-1...0), where n is the rank of the input tensor. Hence by default, this operation performs a regular matrix transpose on 2-D input Tensors.

For example:

```
x = tf.constant([[1, 2, 3], [4, 5, 6]])
tf.transpose(x)  # [[1, 4]
                 #  [2, 5]
                 #  [3, 6]]

# Equivalently
tf.transpose(x, perm=[1, 0])  # [[1, 4]
                              #  [2, 5]
                              #  [3, 6]]

# 'perm' is more useful for n-dimensional tensors, for n > 2
x = tf.constant([[[ 1,  2,  3],
                  [ 4,  5,  6]],
                 [[ 7,  8,  9],
                  [10, 11, 12]]])

# Take the transpose of the matrices in dimension-0
tf.transpose(x, perm=[0, 2, 1])  # [[[1,  4],
                                 #   [2,  5],
                                 #   [3,  6]],
                                 #  [[7, 10],
                                 #   [8, 11],
                                 #   [9, 12]]]
```

Args:

- `a` : A **Tensor** .
- `perm` : A permutation of the dimensions of `a` .
- `name` : A name for the operation (optional).

Returns:

A transposed `Tensor` .