

tf.scatter_sub

```
scatter_sub(
    ref,
    indices,
    updates,
    use_locking=False,
    name=None
)
```

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

See the guide: [Variables > Sparse Variable Updates](#)

Subtracts sparse updates to a variable reference.

```
# Scalar indices
ref[indices, ...] -= updates[...]

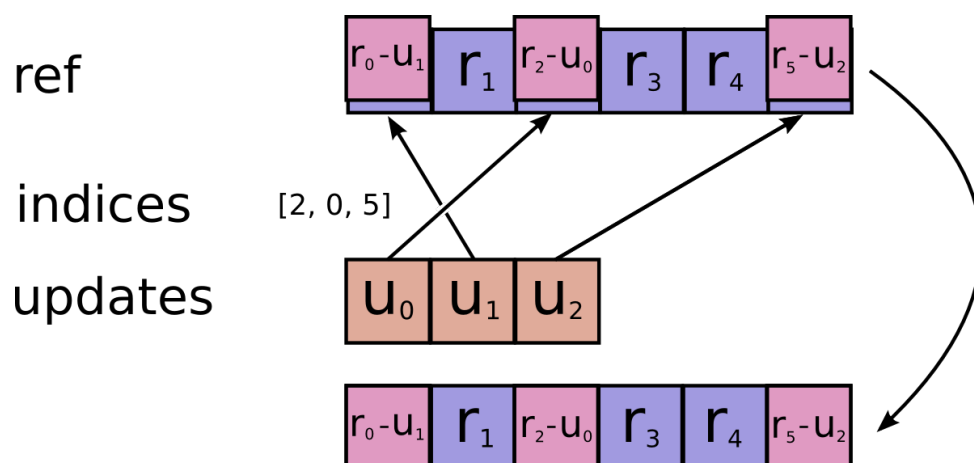
# Vector indices (for each i)
ref[indices[i], ...] -= updates[i, ...]

# High rank indices (for each i, ..., j)
ref[indices[i, ..., j], ...] -= updates[i, ..., j, ...]
```

This operation outputs `ref` after the update is done. This makes it easier to chain operations that need to use the reset value.

Duplicate entries are handled correctly: if multiple `indices` reference the same location, their (negated) contributions add.

Requires `updates.shape = indices.shape + ref.shape[1:]`.



Args:

- ref**: A mutable `Tensor`. Must be one of the following types: `float32`, `float64`, `int64`, `int32`, `uint8`, `uint16`, `int16`, `int8`, `complex64`, `complex128`, `qint8`, `quint8`, `qint32`, `half`. Should be from a `Variable` node.
- indices**: A `Tensor`. Must be one of the following types: `int32`, `int64`. A tensor of indices into the first dimension of **ref**.

- `updates` : A `Tensor` . Must have the same type as `ref` . A tensor of updated values to subtract from `ref` .
- `use_locking` : An optional `bool` . Defaults to `False` . If True, the subtraction will be protected by a lock; otherwise the behavior is undefined, but may exhibit less contention.
- `name` : A name for the operation (optional).

Returns:

Same as `ref` . Returned as a convenience for operations that want to use the updated values after the update is done.

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