tf.matrix_set_diag

Aliases:

- `tf.linalg.set_diag`
- `tf.matrix_set_diag`

```
matrix_set_diag(
    input,
    diagonal,
    name=None
)
```

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

See the guide: Math > Matrix Math Functions

Returns a batched matrix tensor with new batched diagonal values.

Given `input` and `diagonal`, this operation returns a tensor with the same shape and values as `input`, except for the main diagonal of the innermost matrices. These will be overwritten by the values in `diagonal`.

The output is computed as follows:

Assume `input` has `k+1` dimensions `[I, J, K, ..., M, N]` and `diagonal` has `k` dimensions `[I, J, K, ..., min(M, N)]`. Then the output is a tensor of rank `k+1` with dimensions `[I, J, K, ..., M, N]` where:

- `output[i, j, k, ..., m, n] = diagonal[i, j, k, ..., n]` for `m == n`.
- `output[i, j, k, ..., m, n] = input[i, j, k, ..., m, n]` for `m != n`.

Args:

- `input`: A `Tensor`. Rank `k+1`, where `k >= 1`.
- `diagonal`: A `Tensor`. Must have the same type as `input`. Rank `k`, where `k >= 1`.
- `name`: A name for the operation (optional).

Returns:

A `Tensor`. Has the same type as `input`. Rank `k+1`, with `output.shape = input.shape`.

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