

# tf.matrix\_determinant

## Contents

## Aliases:

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- `tf.linalg.det`
- `tf.matrix_determinant`

```
matrix_determinant(  
    input,  
    name=None  
)
```

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

See the guide: [Math > Matrix Math Functions](#)

Computes the determinant of one or more square matrices.

The input is a tensor of shape `[..., M, M]` whose inner-most 2 dimensions form square matrices. The output is a tensor containing the determinants for all input submatrices `[..., :, :]`.

## Args:

- `input`: A `Tensor`. Must be one of the following types: `float32`, `float64`, `complex64`, `complex128`. Shape is `[..., M, M]`.
- `name`: A name for the operation (optional).

## Returns:

A `Tensor`. Has the same type as `input`. Shape is `[...]`.

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