

matriz

February 23, 2025

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[1]: import pandas as pd
import numpy as np
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[2]: def matriz(num_colunas, array1):
    """
    Gera uma matriz sequencial a partir de um array, com o número de colunas
    especificado.

    Args:
        array (list ou np.ndarray): Array de entrada.
        num_colunas (int): Número de colunas desejado na matriz.

    Returns:
        np.ndarray: Matriz sequencial.
    """
    if num_colunas > len(array1):
        raise ValueError("O número de colunas não pode ser maior que o tamanho
        do array.")

    # Número de linhas na matriz
    num_linhas = len(array1) - num_colunas + 1

    # Criando a matriz sequencial
    matriz = np.array([array1[i:i + num_colunas] for i in range(num_linhas)])
    return matriz
```

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[3]: array = np.arange(300)

array
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[3]: array([ 0,  1,  2,  3,  4,  5,  6,  7,  8,  9, 10, 11, 12,
          13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,
          26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38,
          39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51,
          52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64,
          65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77,
          78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90,
          91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103,
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299])

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[7]: matriz1 = matriz(30,array)
matriz1

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[7]: array([[ 0,  1,  2, ..., 27, 28, 29],
           [ 1,  2,  3, ..., 28, 29, 30],
           [ 2,  3,  4, ..., 29, 30, 31],
           ...,
           [268, 269, 270, ..., 295, 296, 297],
           [269, 270, 271, ..., 296, 297, 298],
           [270, 271, 272, ..., 297, 298, 299]])

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