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# NumPy Functions Cheatsheet

#1 **np.array()**: Create a NumPy array from a Python list or tuple.

#2 **np.zeros()**: Create an array filled with zeros of a specified shape.

#3 **np.ones()**: Create an array filled with ones of a specified shape.

#4 **np.arange()**: Create an array with values within a specified range.

#5 **np.linspace()**: Create an array with evenly spaced values over a specified interval.

#6 **np.reshape()**: Reshape an array into a new shape.

#7 **np.random.rand()**: The rand() function is used to generate an array with random values between 0 to 1.

#8 **np.random.randn()**: Generate an array of random numbers from a standard normal distribution. (close to zero)

#9 **np.random.randint()**: Generate an array of random integers within a specified range.

#10 **np.mean()**: Calculate the mean of array elements.

#11 **np.median()**: Calculate the median of array elements.



#12 **np.std()**: Calculate the standard deviation of array elements.

#13 **np.sum()**: Compute the sum of array elements.

#14 **np.min()**, **np.max()**: Find the minimum and maximum values in an array.

#15 **np.argmin()**, **np.argmax()**: Find the indices of the minimum and maximum values in an array.

#16 **np.dot()**: Compute the dot product of two arrays.

#17 **np.transpose()**: Calculate transpose of the array.

#18 **np.concatenate()**: Concatenate arrays along a specified axis.

#19 **np.split()**: Split an array into multiple sub-arrays.

#20 **np.vstack()**, **np.hstack()**: Stack arrays vertically and horizontally.

#21 **np.unique()**: Find the unique elements in an array.

#22 **np.save()**, **np.load()**: Save and load arrays to/from disk.

#23 **np.clip()**: Clip (limit) the values in an array.

#24 **np.where()**: Return elements chosen from two arrays based on a condition.

#25 **np.linalg.inv()**: Calculate inverse of the matrix.

#26 **np.linalg.det()**: Calculate determinant of the matrix.

#27 **np.linalg.solve()**: Solve a system of linear equations.

#28 **np.percentile()**: Compute the nth percentile of the data.

#29 **np.corrcoef()**: Compute the correlation coefficient between two arrays.

#30 **np.deg2rad()**, **np.rad2deg()**: Convert angles from degrees to radians and vice versa.

#31 **np.argsort()**: Return the indices that would sort an array.

#32 **np.searchsorted()**: Find indices where elements should be inserted to maintain order.

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#33 **np.arcsin()**, **np.arccos()**, **np.arctan()**:  
Inverse trigonometric functions.

#34 **np.linalg.eig()**: Eigenvalues and  
eigenvectors of a square matrix.

#35 **np.linalg.svd()**: Singular value  
decomposition.

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