



Numpy Cheat Sheet

Quick Reference For
Essential Functions



NumPy Basics

1. Installing And Importing NumPy

```
pip install numpy
```

Once it's installed, import it into your code.

```
import numpy as np
```

2. Array Creation

```
# Creates a 1D array
# Creates a 2D array
```

- **np.zeros()**: Creates an array filled with zeros
- **np.ones()**: Creates an array filled with ones
- **np.identity()**: Creates an identity matrix array

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3. Array Attributes

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```
a = np.array([(1, 2, 3), (4, 5, 6)])
#Print out the array shape
print(a.shape) # Output: (2, 3)
```

4. Data Types

```
import numpy as np
a = np.array([1, 2, 3], dtype=float)
# Creates an array of floats
```

Common NumPy data types include:

- np.int32: 32-bit integer
- np.int64: 64-bit integer
- np.float32: 32-bit floating-point number
- np.float64: 64-bit floating-point number
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[Youtube link](#)

Array Manipulation

1. Reshaping

To reshape an array, use the reshape() function:

```
arr = np.array([1, 2, 3, 4, 5, 6])
new_arr = arr.reshape(2, 3)
```

2. Copying

3. Concatenation

