**PYTHON CHEAT SHEET**

**Types and Type Conversion**

str()       '5', '3.45', 'True'

int()       5, 3, 1

float()    5.0, 1.0

bool()    True, True, True

**Strings**

my\_string = 'thisStringIsAwesome'

>> my\_string

'thisStringIsAwesome'

my\_string \* 2

'thisStringIsAwesomethisStringIsAwesome'

>>> my\_string + 'Innit'

'thisStringIsAwesomeInnit'

>>> 'm' in my\_string

True

**String Operations**

my\_string[3]

>>> my\_string[4:9]

**String Methods**

> my\_string.upper()

>>> my\_string.lower()

>>> my\_string.count('w')

>>> my\_string.replace('e', 'i')

>>> my\_string.strip()

**Lists**

>>> a = 'is'

>>> b = 'nice'

>>> my\_list = ['my', 'list', a, b]

>>> my\_list2 = [[4,5,6,7], [3,4,5,6]]

Selecting List Elements Subset

Select item at index 1

>>> my\_list[1]

Select 3rd last item

>>> my\_list[-3]

Slice

Select items at index 1 and 2

>>> my\_list[1:3]

Select items after index 0

>>> my\_list[1:]

Select items before index 3

>>> my\_list[:3]

Copy my\_list

>>> my\_list[:]

Subset Lists of Lists

my\_list[list][itemOfList]

>>> my\_list2[1][0]

>>> my\_list2[1][:2]

**List Operations**

>>> my\_list + my\_list

['my', 'list', 'is', 'nice', 'my', 'list', 'is', 'nice']

>>> my\_list \* 2

['my', 'list', 'is', 'nice', 'my', 'list', 'is', 'nice']

>>> my\_list2 > 4

True

**List Methods**

>>> my\_list.index(a)

>>> my\_list.count(a)

>>> my\_list.append('!')

>>> my\_list.remove('!')

>>> del(my\_list[0:1])

>>> my\_list.reverse()

>>> my\_list.extend('!')

>>> my\_list.pop(-1)

>>> my\_list.insert(0,'!')

>>> my\_list.sort()

**Numpy Arrays**

>>> my\_list = [1, 2, 3, 4]

>>> my\_array = np.array(my\_list)

>>> my\_2darray = np.array([[1,2,3],[4,5,6]])

**Selecting Numpy Array Elements**

Subset

>>> my\_array[1]

2

Slice

>>> my\_array[0:2]

array([1, 2])

Subset 2D Numpy arrays

>>> my\_2darray[:,0]

array([1, 4])

**Numpy Array Operations**

>> my\_array > 3

array([False, False, False, True], dtype=bool)

>>> my\_array \* 2

array([2, 4, 6, 8])

>>> my\_array + np.array([5, 6, 7, 8])

array([6, 8, 10, 12])

**Numpy Array Functions**

>>> my\_array.shape

>>> np.append(other\_array)

>>> np.insert(my\_array, 1, 5)

>>> np.delete(my\_array,[1])

>>> np.mean(my\_array)

>>> np.median(my\_array)

>>> my\_array.corrcoef()

>>> np.std(my\_array)

**Libraries**

Import libraries

>>> import numpy

>>> import numpy as np

Selective import

>>> from math import pi