

DATA SCIENCE

PYTHON - INTERMEDIATE

CHEAT SHEET PART- I



KEY BASICS, PRINTING AND GETTING HELP

s - A Python string variable
i - A Python integer variable
f - A Python float variable
L - A Python list variable
d - A Python dictionary variable

STRINGS

s.lower() - Returns a lowercase version of s

s.title() - Returns s with the first letter of every word capitalized

"23".zfill(4) - Returns "0023" by left-filling the string with 0's to make it's length 4.

s.splitlines() - Returns a list by splitting the string on any newline characters.

Python strings share some common methods with lists

s[:5] - Returns the first 5 characters of s

"fri" + "end" - Returns "friend"

"end" in s - Returns True if the substring "end" is found in s

RANGE

Range objects are useful for creating sequences of integers for looping.

`range(5)` - Returns a sequence from 0 to 4

`range(2000,2018)` - Returns a sequence from 2000 to 2017

`range(0,11,2)` - Returns a sequence from 0 to 10, with each item incrementing by 2

`range(0,-10,-1)` - Returns a sequence from 0 to -9

`list(range(5))` - Returns a list from 0 to 4

DICTIONARIES

`max(d, key=d.get)` - Return the key that corresponds to the largest value in d

`min(d, key=d.get)` - Return the key that corresponds to the smallest value in d

SETS

`my_set = set(l)` - Return a set object containing the unique values from l

`len(my_set)` - Returns the number of objects in my_set (or, the number of unique values from l)

`a in my_set` - Returns True if the value a exists in my_set

REGULAR EXPRESSIONS

`import re` - Import the Regular Expressions module

`re.search("abc",s)` - Returns a match object if the regex "abc" is found in s, otherwise None

`re.sub("abc","xyz",s)` - Returns a string where all instances matching regex "abc" are replaced by "xyz"

LIST COMPREHENSION

A one-line expression of a for loop `[i ** 2 for i in range(10)]` - Returns a list of the squares of values from 0 to 9

`[s.lower() for s in l_strings]` - Returns the list `l_strings`, with each item having had the `.lower()` method applied

`[i for i in l_floats if i < 0.5]` - Returns the items from `l_floats` that are less than 0.5

FUNCTIONS FOR LOOPING

`for i, value in enumerate(l): print("The value of item {} is {}".format(i,value))`
- Iterate over the list `l`, printing the index location of each item and its value

`for one, two in zip(l_one,l_two): print("one: {}, two: {}".format(one,two))`
- Iterate over two lists, `l_one` and `l_two` and print each value

`while x < 10: x += 1`

- Run the code in the body of the loop until the value of `x` is no longer less than 10

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