Basics

```
IN & OUTPUT
```

```
1 print(object)
                                - # converts any object to
                                    string and prints it to
2 #this is a comment
4 x = 1.674
                                - # Variable
5 y = "Hello"
                                - # Assignment
6 del x
                                - # Object Deletion
7 input(prompt)
                                - # gets input from the user
8 raw input(prompt)
                                - # gets input as a string
9 help()
                                - # offers interactive help
```

IMPORT PACKAGES

```
1 import module
2 import module as name
3 from module, submodule import function
```

Datatypes

Structures

```
1 type(object) - # returns class type of object
```

Operations

Basic Arithmetics: + - * /	Logical And: and
Exponentiation: **	Logical Or: or
Floor Division: //	Logical Not: not
Moduls: %	

NUMBERS

Find help online: www.statworx.com/de/blog

Assignment Operators: Combine one of the above operators with: =, f.e. x + = 3

```
Equal to: == Not Equal to: != Less than: < Greather than: >
```

Less than or equal to: <= Greather than or equal to: >=

```
1 substr in str
                              - # checks if substring is in string
     2 substr not in str
                              - # checks if substring is not in string
                              - # joins two strings together
       str + str
     3 \
                              - # to insert characters that are illegal in a string,
                                  followed by the illegal charakter
     4 f"Hello {object}"
                              - # embed expressions inside a string
     5 len(str)
                              - # get the length of a string (number of characters)
TEXT
     6.strip()
                              - # removes any whitespace at beginning or end of string
     7.upper()
                              - # returns string in upper case
     8.lower()
                              - # returns string in lower case
     9 .replace(old, new)
                              - # replaces a string with another string
    10 .split(separator)
                              - # splits the str at specified separator, returns list
    11 .count(str)
                              - # returns the number of times a specified value occurs
                                   in a string
    12 .find(str)
                              - # searches the string for a specified value and returns
                                  the position of where it was found
```

```
1 object in list
                         - # checks if object exists in list
 2 object not in list
                         - # checks if object does not exists in list
 3 list + list
                         - # joins two lists together
 4 len(list)
                          - # determines how many items a list has
 5 .append(object)
                         - # adds object to the end of list
 6.insert(index, object) - # adds object at a specified index
7 .remove(object)
                         - # removes the specified object
8 .pop(index)
                         - # removes specified index (or last item if index is
                              not specified)
 9 .copy()
                         - # returns a copy of the list
10 .count(object)
                         - # returns the number of items with specified value
11 .index(object)
                          - # returns the position at the first occurence of the
                              specified value
12 .sort()
                          - # sorts the list ascending by default
13 .reverse()
                          - # reverses the sorting order of items
```



PYTHON BASICS CHEAT SHEET

STATWORX ACADEMY FURTHER PYTHON TRAININGS



CONTROL

CONDITION, LOOPS, LOOP

CONTROL STRUCTURES

```
1 a[0]
         - # get the first element
2a[-1] - # get the last element
3 a[3:6] - # elements from position 3 to position 6 (not included)
4 a[:6] - # all elements up to position 6 (not included)
5 a[6:] - # all elements from position 6 on (not included)
6a[-4:-1] - # elements from the 4th from last to the last position (not included)
7 a[-4:] - # elements from the 4th from last to the last position (included)
8 a[:-4] - # all elements up to the fourth last (not included)
```



Python Basics







BEGINNER LEVEL







Data Visualization

Statistics

ADVANCED LEVEL



3 elif condition_2:

IF-ELSE-CONDITION

1 if condition:

WHILE-LOOP FOR-LOOP

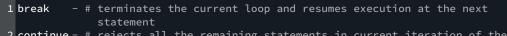
1	while	condition:	
2		statement	(s)

1 for var in iterable: statement (s)

LOOP CONTROL STATEMENTS

statement (s)

statement (s)



2 continue - # rejects all the remaining statements in current iteration of the loop and moves the control back to the top of the loop - # is used when a statement is required syntactically but no command) 3 pass or code should be executed







Interactive Data Visualization With the interactive library plotly

Advanced ML Advanced algorithms



Deep Learning

Using TensorFlow API Keras



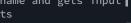
Advanced Programming

OOP in python









- # returns the value of the attribute;

attributes are properties of an

METHODS

ATTRIBUTES

1 *object*.attribute

1 object.method(arg1, arg2, ...) - # functions that belong to an object and called through the dot syntax

object

-\{-\

Distributed Systems

In Spark



Advanced Statistics

e.g. multilevel models



Dashboarding

Using Dash or Streamlit



DevOps

Versioning and debugging in python



Advanced Deep Learning

Topics regarding neural networks



NLP

Introduction to sequential data and embeddings for languange



Application of DevOps in ML context



