

Python

Introduction

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R, python

statistics, data science, machine learning

Hello, world

- import
- help, ?

Indentation

- Try to be like pseudo-code
- Consistency is the key
- Custom is 4 spaces, but there is variation

Common types:

- int
- float
- str
- list, tuple
- dict, set
- NoneType

Control flow

- if, elif, else
- for, for in
- while
- range
- return

Logic

- True
- False
- and, or, not

Structure access

- list elements, slices, stride
- list comprehensions
- and for dicts
- strings look like lists
- in
- `sort()` vs `.sort()`

functions

- def
- parameters (and default, and named)
- comments

exercise

Write the function 'contains' to find a character in a string.

For example, `find("le chien est bleu", "t")`.

strings

- try asking for help on a string
- find
- startswith
- endswith
- in

exercise

Write a function that removes the n th element of a list.

exercise

Write a function that generates a dict of the first 20 integers mapped to their squares.

modules

- random
- time
- datetime
- math

exercise

Write `Fib(n)` to generate the first n Fibonacci numbers.

exercise

Write `Fib(n)` to generate the first n Fibonacci numbers.

Now do it better.

```
%timeit
```

Review

`https://github.com/addfor/tutorials`

II. Python Basic Concepts

Questions?