

# 01.02-ipython-interpreter

February 21, 2020

## 1 Ipython

### 1.1 ipython

Python—ipython

ipython

```
ipython
pythonipython
```

```
In [1]: print("hello, world")
```

```
hello, world
```

```
In [2]: a = 1
```

```
print
```

```
In [3]: a
```

```
Out[3]: 1
```

```
In [4]: b = [1, 2, 3]
```

### 1.2 ipython magic

```
ipython%magiclinux
magic
```

```
In [5]: %lsmagic
```

```
Out[5]: Available line magics:
```

```
%alias %alias_magic %autoawait %autocall %automagic %autosave %bookmark %cat %
```

```
Available cell magics:
```

```
%%! %%HTML %%SVG %%bash %%capture %%debug %%file %%html %%javascript %%js %%
```

```
Automagic is ON, % prefix IS NOT needed for line magics.
```

```
line magic
cell magic cell
Automagic is ON, % prefix IS NOT needed for line magics.%
whos
```

```
In [6]: %whos
```

Variable	Type	Data/Info
a	int	1
b	list	n=3

```
reset
```

```
In [7]: %reset -f
```

```
In [8]: %whos
```

```
Interactive namespace is empty.
```

```
pwd
```

```
In [9]: %pwd
```

```
Out[9]: '/home/jovyan'
```

```
mkdir
```

```
In [10]: %mkdir demo_test
```

```
cd
```

```
In [11]: %cd demo_test/
```

```
/home/jovyan/demo_test
```

```
writefile cell
```

```
In [12]: %%writefile hello_world.py
         print("hello world")
```

```
Writing hello_world.py
```

```
ls
```

```
In [13]: %ls
```

```
hello_world.py
```

```
run
```

```
In [14]: %run hello_world.py
```

```
hello world
```

```
In [15]: import os
```

```
os.remove('hello_world.py')
```

```
hello_world.py
```

```
In [16]: %ls
```

```
In [17]: %cd ..
```

```
/home/jovyan
```

```
rmdir
```

```
In [18]: %rmdir demo_test
```

```
hist
```

```
In [19]: %hist
```

```
print("hello, world")
```

```
a = 1
```

```
a
```

```
b = [1, 2, 3]
```

```
%lsmagic
```

```
%whos
```

```
%reset -f
```

```
%whos
```

```
%pwd
```

```
%mkdir demo_test
```

```
%cd demo_test/
```

```
%%writefile hello_world.py
```

```
print("hello world")
```

```
%ls
```

```
%run hello_world.py
```

```
import os
os.remove('hello_world.py')
%ls
%cd ..
%rmdir demo_test
%hist
```

### 1.3 ipython

?

In [20]: sum?

?? python

```
In [21]: # numpymatplotlib
         %pylab
         # sort
         sort??
```

Using matplotlib backend: TkAgg

Populating the interactive namespace from numpy and matplotlib

**ipython** <tab>  
\_ cell

```
In [22]: a = 12
         a
```

Out[22]: 12

```
In [23]: _ + 13
```

Out[23]: 25

!

```
In [24]: #
         !date
```

Fri Feb 21 12:27:09 UTC 2020

```
In [25]: #
         # docker
         !wget www.baidu.com
```

```
--2020-02-21 12:27:11-- http://www.baidu.com/
Resolving www.baidu.com (www.baidu.com)... failed: Temporary failure in name resolution.
wget: unable to resolve host address www.baidu.com
```

```
In [28]: # jieba
        # docker
        !pip install jieba
```

Collecting jieba

```
Retrying (Retry(total=4, connect=None, read=None, redirect=None, status=None)) after connecti
Retrying (Retry(total=3, connect=None, read=None, redirect=None, status=None)) after connecti
Retrying (Retry(total=2, connect=None, read=None, redirect=None, status=None)) after connecti
Retrying (Retry(total=1, connect=None, read=None, redirect=None, status=None)) after connecti
Retrying (Retry(total=0, connect=None, read=None, redirect=None, status=None)) after connecti
Could not find a version that satisfies the requirement jieba (from versions: )
No matching distribution found for jieba
```

## ipython

```
In [29]: #
        1 + "hello"
```

-----

TypeError

Traceback (most recent call last)

```
<ipython-input-29-71aabd3fc56c> in <module>
    1 #
----> 2 1 + "hello"
```

TypeError: unsupported operand type(s) for +: 'int' and 'str'