IPython

Interactive Python shell

CONCEPTS

Magics start with % (line) or %% (cell). With automagic on, the % may be left off.

In[n] your input
↓ runs
Out[n] result
↓ saved as
_ __ ___ last 3 outputs

HELP AND INSPECTION

<obj>?
Show docs for an object

<obj>??
Show source code too

<obj>.<TAB>
Complete attributes and methods

%<magic>?
Docs for one magic

RUNNING CODE

%run *<script.py> <args>*
Run a script in this session

%load *<file>*
Load code into the prompt

%edit
Compose input in your editor

%paste
Paste clipboard code as-is

%cpaste
Paste block, end with --

TIMING

%time *<stmt>*
Time one run

%timeit *<stmt>*
Time many runs, average

HISTORY AND OUTPUT

%history
Show session input

In[*<n>***]**
Input of cell n

Out[*<n>***]**
Output of cell n

HISTORY AND OUTPUT (cont.)

_ / __ / ___
Last three outputs

SHELL AND SYSTEM

!*<command>*
Run a shell command

<var> = !*<command>*
Capture output as a list

!*<command>* **{***<pyvar>***}**
Insert a Python value

%%bash
Run the cell in bash

%cd *<dir>*
Change directory

%pip install *<pkg>*
Install into this environment

DEBUGGING

%debug
Open pdb after an exception

%pdb on
Debug every uncaught error

MODULES AND WORKSPACE

%load_ext autoreload
Enable the extension

%autoreload 2
Reload all before each run

%who
List variable names

%whos
List variables with types

CONFIG AND SHORTCUTS

ipython -i *<script.py>*
Run, then stay interactive

Keyboard

Key	Does
Tab	Complete or cycle
Ctrl+R	Search history
Ctrl+O	Open new line
Esc Enter	Force run block
Ctrl+L	Clear screen
Ctrl+D	Exit