

TOOL

IPython Tip Sheet

Help and Autocompletion

- `obj?` : print documentation about `obj`
- `obj??` : print documentation about `obj` and any available source code defining it
- `obj.<TAB>` : list the attributes of `obj` (accessible via `.` typed after `obj`)
- `sometext<TAB>`: show list of possible completions after any initial characters

IPython Magic Functions (prefaced with `%`)

Information on magic functions

- `%magic` : print in-depth information about set of available magic functions
- `%lsmagic` : print names of all available magic functions
- `%timeit?`, `%lsmagic?`, `%who?` : print help for any magic function by appending `?` to the end, e.g., `%timeit?`, to get information about `%timeit`

Running code, and inspecting commands and variables

- `%run filename`: execute the python code in `filename`, and bring everything from that module's namespace into the current interactive namespace
- `%hist` : print list of full command history in current session
- `%hist -f filename` : save list of full command history to `filename`
- `%who` : print list of all defined variables
- `%whos`: print list of all defined variables and their values
- `%debug` : activate the interactive debugger after an error has occurred (requires knowledge of Python `pdb` debugger operation)
- `%pprint` : toggle "pretty printing" on and off (may help with viewing contents of large objects)
- `%timeit expression` : run specified Python expression, and return information how long it took to run

Interactions with the Operating System (files, etc.)

- `%ls` : list files in current directory
- `%more filename` : print the contents of `filename` to the screen
- `%cp` : copy one file to another, or to another directory (e.g., `%cp file1 file2`)
- `%mv` : rename one file to another, or to another directory (e.g., `%mv file1 file2`)
- `%mkdir directory_name` : make a new directory called `directory_name`
- `%cd directory_name`: change current directory to specified `directory_name`
- `%pwd` : print the current directory
- `![command]` : execute the specified command in the system shell (e.g., `!ls -l`)

