Jupyter Notebook Notebook shortcuts

START HERE

Shift + **Enter**
Run cell, select next

M
Markdown cell

Esc
Command mode

Ctrl + **Shift** + **C**
Command palette

Enter
Edit mode

A
Insert cell above

B
Insert cell below

D › **D**
Delete cell

Command mode keys act on cells → Enter → **Edit mode** keys type into a cell → Esc → **Command mode** back to cells

CONCEPTS

Esc leaves a cell (blue bar, command mode); Enter goes back in (green bar, edit mode). Single letters only work in command mode.

One kernel runs all cells in order of execution, not of position; the number in [ ] shows that order.

Shortcuts are for Notebook 7 on Linux/Windows. On macOS read Ctrl as Cmd where the Accel key is used (run, select all, palette).

Classic Notebook 6 and JupyterLab differ in places: Notebook 6 used Ctrl+Shift+P for the palette and I I / 0 0 for interrupt and restart.

MODES & RUNNING

Shift + **Enter**
Run cell and select next

Ctrl + **Enter**
Run cell and stay

Alt + **Enter**
Run cell and insert below

Esc / **Ctrl** + **M**
Enter command mode

Enter Enter edit mode

MODES & RUNNING (cont.)

Shift + **R**
Toggle side-by-side render

NAVIGATE & SELECT

Up / **K** Select cell above

Down / **J** Select cell below

Shift + **Up** / **Shift** + **K**
Extend selection up

Shift + **Down** / **Shift** + **J**
Extend selection down

Ctrl + **A** Select all cells
Command mode; Cmd+A on macOS.

Left
Collapse heading / go to parent

Right Expand heading

CELLS

A Insert cell above

B Insert cell below

D › **D** Delete cell

Z Undo cell action

Shift + **Z** Redo cell action

C Copy cell

X Cut cell

V Paste cell below

CELLS (cont.)

Shift + **M**
Merge selected cells

Ctrl + **Backspace**
Merge with cell above

Ctrl + **Shift** + **-**
Split cell at cursor
Edit mode.

Ctrl + **Shift** + **Up**
Move cell up

Ctrl + **Shift** + **Down**
Move cell down

O Toggle cell output

Shift + **L**
Toggle line numbers

CELL TYPES

M Change to Markdown

Y Change to code

R Change to raw
Raw cells pass through nbconvert untouched.

1-6 Change to heading 1-6
Command mode, Markdown cell.

KERNEL & PALETTE

Ctrl + **Shift** + **C**
Open command palette
Type a command name: restart kernel, run all, clear outputs, toggle theme.

KERNEL & PALETTE (cont.)

Tab Complete name
Edit mode.

Kernel menu (no default keys in Notebook 7)

Menu item	Effect
Interrupt	Stop a running cell
Restart	Fresh process, state lost
Restart and Run All	Clean top-to-bottom check
Change Kernel	Switch environment

Restart and Run All before sharing: it proves the notebook works top to bottom.

MAGICS

%timeit *<expr>*
Time a statement

%%time
Time the whole cell

%%bash
Run cell as a bash script

!*<cmd>*
Run a shell command

%matplotlib inline
Plots inside the notebook

%load_ext autoreload
Enable module reloading
Follow with %autoreload 2 to reload edited modules before each run.

MAGICS (cont.)

%who
List variables

%run *<file.py>*
Run a script in this kernel

%pip install *<pkg>*
Install into the running kernel
Prefer over !pip: it targets the kernel's environment.

%lsmagic
List all magics

*<name>***?**
Show help for an object
Add ?? for source code.

CLI

jupyter notebook
Start the Notebook server

jupyter lab
Start JupyterLab

jupyter nbconvert --to *<fmt>* *<nb>*
Convert to html, pdf or script

jupyter nbconvert --execute --to notebook *<nb>*
Run and save outputs

jupyter kernelspec list
List installed kernels

python -m ipykernel install --user --name *<env>*
Register an environment as kernel

CLI (cont.)

jupyter kernelspec remove *<name>*
Remove a kernel

jupyter notebook list
Show running servers and URLs

jupyter --paths
Show config and data paths

jupyter notebook --no-browser --port *<n>*
Headless on a chosen port

RECIPES

Use a venv in Jupyter

```
python -m venv .venv
source .venv/bin/activate
pip install ipykernel
python -m ipykernel install --
user --name myenv
```

Notebook to clean script

```
jupyter nbconvert --to script
analysis.ipynb
# writes analysis.py
```

Run remote server over SSH

```
# on the server
jupyter notebook --no-browser
--port 8888
# on your laptop
ssh -L 8888:localhost:8888
<user>@<host>
```

Reload edited modules

```
%load_ext autoreload
%autoreload 2
```