

Jupyter Notebook

Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. It is used for data cleaning and transformation, numerical simulation, statistical modeling, data visualization, machine learning, and much more.



Saving/Loading Notebook

Open an existing Notebook → File → Open...

Save Current Notebook → File → Make a Copy...

Save Current Notebook & record Checkpoint → File → Save as... / Rename... / Save and Checkpoint

Preview of the printed Notebook → File → Print Preview

Close Notebook & stop running scripts → File → Close and Halt

File menu options:

- New Notebook → Create new Notebook
- Open... → Open existing Notebook
- Make a Copy... → Make copy of the current Notebook
- Save as... / Rename... → Rename current Notebook
- Save and Checkpoint → Save and record checkpoint
- Revert to Checkpoint → Revert Notebook to a previous Checkpoint
- Print Preview → Print Preview
- Download as → Download Notebook as-IPython Notebook, Python, HTML, Markdown, PDF
- Trusted Notebook
- Close and Halt

Edit Cells

Copy cells from Clipboard to current position → Edit → Cut Cells

Paste cells below current cell → Edit → Paste Cells Below

Delete cells → Edit → Delete Cells

Split up cell from current position → Edit → Split Cell

Merge current cell with below → Edit → Merge Cell Below

Move current cell down → Edit → Move Cell Down

Find and replace in selected cells → Edit → Find and Replace

Copy attachments of current cell → Edit → Cut Cell Attachments

Insert image in selected cells → Edit → Insert Image

Edit menu options:

- Cut Cells → Cut the selected cells to Clipboard
- Paste Cells Above → Paste cells above current cell
- Paste Cells Below → Paste cells below current cell
- Delete Cells → Delete selected cells
- Undo Delete Cells → Revert 'Delete cells' invocation
- Split Cell → Split the selected cell
- Merge Cell Above → Merge current cell with above
- Merge Cell Below → Merge current cell with below
- Move Cell Up → Move current cell up
- Move Cell Down → Move current cell down
- Edit Notebook Metadata → Adjust Metadata underlying the current Notebook
- Find and Replace → Find and replace in selected cells
- Cut Cell Attachments → Remove cell attachments
- Paste Cell Attachments → Paste attachments of current cell
- Insert Image → Insert image in selected cells

View Cells

Toggle display of Jupyter logo → View → Toggle Header

Toggle display of cell action icons → View → Toggle Line Numbers

View menu options:

- Toggle Header → Toggle display of Jupyter logo & Filename
- Toggle Line Numbers → Toggle line numbers in cell
- Cell Toolbar → Toggle display of cell action icons

Insert Cells

Add new cell below the current one → Insert → Insert Cell Below

Insert menu options:

- Insert Cell Above → Add new cell above the current one
- Insert Cell Below → Add new cell below the current one

Keyboard Shortcuts

Command	Description
enter	enter edit mode
Command + a; Command + c; Command + v	select all; copy; paste
Command + z; Command + y	undo; redo
Command + s	save and checkpoint
Command + b; Command + a	insert cell below; insert cell above
Shift + Enter	run cell, select below
Shift + m	merge cells
Command +]; Command + [indent; dedent
Ctrl + Enter	run cell
Option + Return	run cell, insert cell below
Escape	enter command mode
Escape + d + d	delete selected cell
Escape + y	change cell to code
Escape + m	change cell to markdown
Escape + r	change cell to raw
Escape + 1	change cell to Heading 1
Escape + n	change cell to heading n
Escape + b	create cell below
Escape + a	insert cell above

Magic Commands

Statement	Explanation	Example
%magic	Comprehensively lists and explains magic functions	%magic
%automagic	When active, enables you to call magic functions without the '%'	%automagic
%quickref	Launch IPython quick reference	%quickref
%pastebin	Pastebins lines from your current session.	%pastebin 3 18-20 ~1/1-5
%debug	Enters the interactive debugger	%debug
%hist	Print command input and output history	%hist
%pdb	Automatically enter python debugger after any exception	%pdb
%cpaste	Opens up a special prompt for manually pasting Python code for execution	%cpaste
%reset	Delete all variables and names defined in the current namespace	%reset
%run	Run a python script inside a notebook	%run script.py
%who, %who_ls, %whos	Display variables defined in the interactive namespace, with varying levels of verbosity	%who, %who_ls, %whos
%xdel	Delete a variable in the local namespace. Clear any references to that variable	%xdel variable
%time	Times a single statement	In [561]: %time method = [a for a in data if b.startswith('http')]

Execute Cells

Run Current Cells down & create one below → Cell → Run Cells

Run all Cells → Cell → Run All

Run all Cells above the current one → Cell → Run All Above

Toggle & clear current outputs → Cell → Current Outputs

Cell menu options:

- Run Cells → Run Selected Cells
- Run Cells and Select Below → Run Current Cells down & create one below
- Run All → Run all Cells below current one
- Run All Above → Run all Cells above the current one
- Run All Below → Run all Cells below current one
- Cell Type → Change the cell type
- Current Outputs → Toggle & clear all outputs
- All Output

Kernel Cells

Restart Kernel → Kernel → Restart

Restart Kernel & Run all cells → Kernel → Restart & Run All

Shutdown all cells → Kernel → Shutdown

Run other installed kernels → Kernel → Change kernel

Kernel menu options:

- Interrupt → Interrupt kernel
- Restart → Restart kernel
- Restart & Clear Output → Interrupt kernel & Clear all output
- Restart & Run All → Restart & Run All
- Reconnect → Reconnect to a remote Notebook
- Shutdown → Shutdown
- Change kernel → Change kernel

Widgets

Clear Notebook with Interactive widget → Widgets → Clear Notebook Widget State

Embed current widgets → Widgets → Embed Widgets

Widgets menu options:

- Save Notebook Widget State → Save Notebook with Interactive widget
- Clear Notebook Widget State → Clear Notebook with Interactive widget
- Download Widget State → Download all widget models in use
- Embed Widgets → Embed current widgets

Help

Built-in keyboard shortcuts → Help → Keyboard Shortcuts

Notebook help topics → Help → Notebook Help

Python help topics → Help → Python Reference

NumPy help topics → Help → NumPy Reference

Matplotlib help topics → Help → Matplotlib Reference

Pandas help topics → Help → pandas Reference

Help menu options:

- User Interface Tour → Walk through a UI Tour
- Keyboard Shortcuts → Edit the Built-in keyboard shortcuts
- Notebook Help → Notebook help topics
- Markdown → Markdown available in Notebook
- Python Reference → Python help topics
- IPython Reference → IPython help topics
- NumPy Reference → NumPy help topics
- SciPy Reference → SciPy help topics
- Matplotlib Reference → Matplotlib help topics
- SymPy Reference → SymPy help topics
- pandas Reference → pandas help topics
- About → About Jupyter Notebook