

Jupyter Notebook Cheat Sheet : A Beginner's Guide to Jupyter Notebook

Sayantini.

Jupyter Notebooks are a powerful way to write and iterate on your [Python](#) code for [data analysis](#). Jupyter Notebook is built off of IPython and the Kernel runs the computations and communicates with the Jupyter Notebook front-end interface. This Jupyter Notebook Cheat Sheet will help you find your way around the well-known Notebook App, a subproject of Project Jupyter.

Jupyter Notebook Cheat Sheet

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.

This Jupyter Notebook Cheat Sheet is a guide to the Toolbar and the keyboard shortcuts used in Jupyter Notebook.



JUPYTER NOTEBOOK CHEAT SHEET

Learn PYTHON from experts at <https://www.edureka.co>

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

File Edit View

New Notebook → Create new Notebook

Open... → Open an existing Notebook

Make a Copy... → Make copy of the current Notebook

Save as... → Save Current Notebook

Rename... → Rename current Notebook

Save and Checkpoint → Save Current Notebook & record Checkpoint

Revert to Checkpoint → Revert Notebook to a previous Checkpoint

Print Preview → Preview of the printed Notebook

Download as → Download Notebook as iPython Notebook, Python HTML, Markdown, PDF

Close and Halt → Close Notebook & stop running scripts

Edit Cells

Edit View Insert

Cut Cells → Cut the selected cells to clipboard

Copy Cells → Copy cells to clipboard

Paste Cells Above → Paste cells above current cell

Paste Cells Below → Paste cells below current cell

Paste Cells & Replace → Paste cells on top of current cell

Delete Cells → Revert 'Delete cells' invocation

Undo Delete Cells → Undo Delete Cells

Split Cell → Split cell from current position

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

Copy Cell Attachments → Copy Cell Attachments

Paste Cell Attachments → Paste attachments of current cell

Insert Image → Insert image in selected cells

View Cells

View Insert Cell

Toggle Header → Toggle display of Jupyter logo & Filename

Toggle Toolbar → Toggle display of toolbar

Toggle Line Numbers → Toggle line numbers in cell

Cell Toolbar → Toggle display of cell action icons

Insert Cells

Insert Cell Kern

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 + j; 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 + i	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

Cell Kernel Widgets

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

Run Cells → Run Current Cells down & create one above

Run Cells and Select Below → Run Current Cells down & create one above

Run All → Run all Cells above the current one

Run all Cells above the current one → Run all Cells below current one

Run All Above → Change the cell type

Run All Below → Toggle & clear all outputs

Cell Type → Toggle & clear all outputs

Current Outputs → Toggle & clear all outputs

All Output → Toggle & clear all outputs

Kernel Cells

Kernel Widgets Help

Restart Kernel → Interrupt kernel

Restart Kernel & Run all cells → Interrupt kernel & Clear all output

Shutdown all cells → Reconnect to a remote Notebook

Run other installed kernels → Change kernel

Widgets

Widgets Help

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

Help

User Interface Tour → Walk through a UI Tour

Keyboard Shortcuts → Edit the Built-in keyboard shortcuts

Edit 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

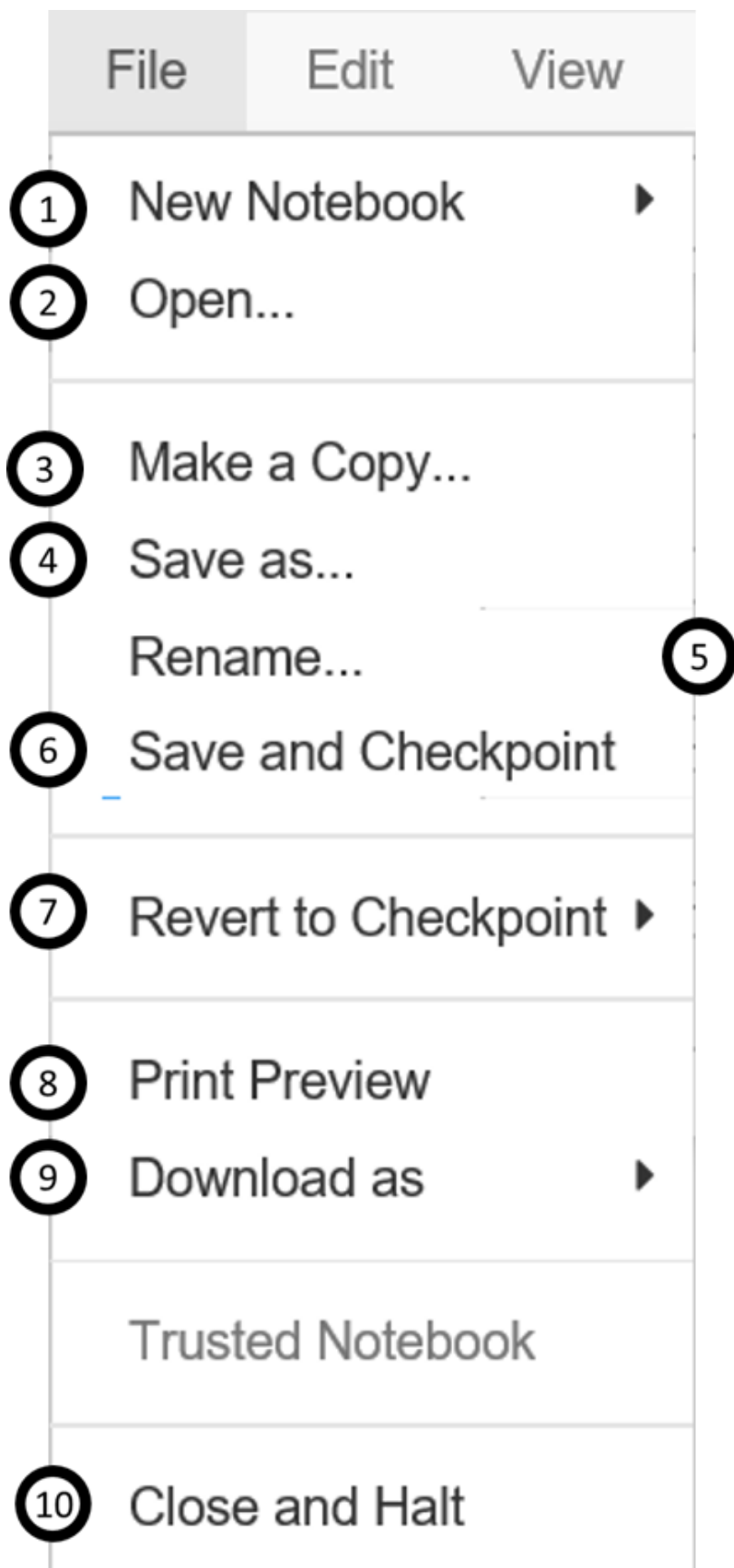
SymPy Reference → SymPy help topics

pandas Reference → pandas help topics

About → About Jupyter Notebook

Saving/Loading Notebooks

Let's begin with the Saving or Loading of Jupyter Notebook



1. Create new Notebook
2. Open an existing Notebook
3. Make a Copy of the Current Notebook
4. Save current Notebook
5. Rename current Notebook
6. Save current Notebook and record Checkpoint
7. Revert Notebook to a previous checkpoint
8. Preview of the printed Notebook
9. Download Notebook as-
 - IPython Notebook
 - Python
 - HTML
 - Markdown
 - PDF
10. Close Notebook & stop running scripts

Keyboard Shortcuts

The following are the most used keyboard shortcuts for a Jupyter Notebook running the Python Kernel. This list changes frequently. Check help->keyboard shortcuts in your notebook for the latest 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

Edit Cells

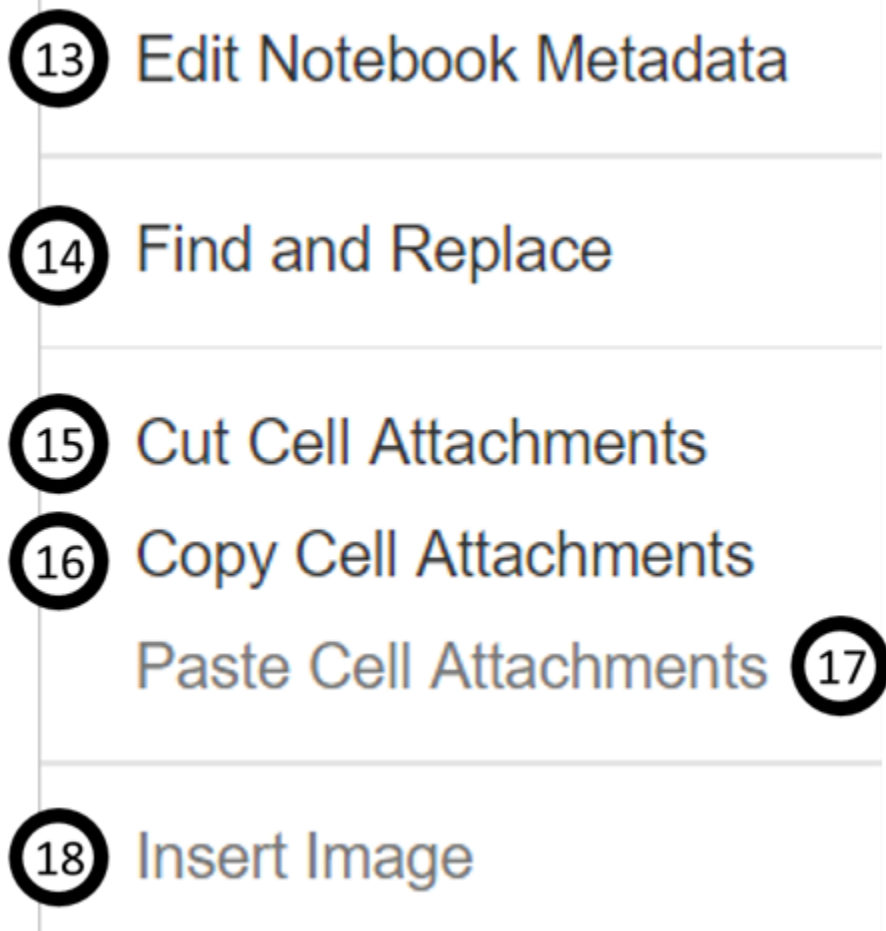
Edit

View

Insert

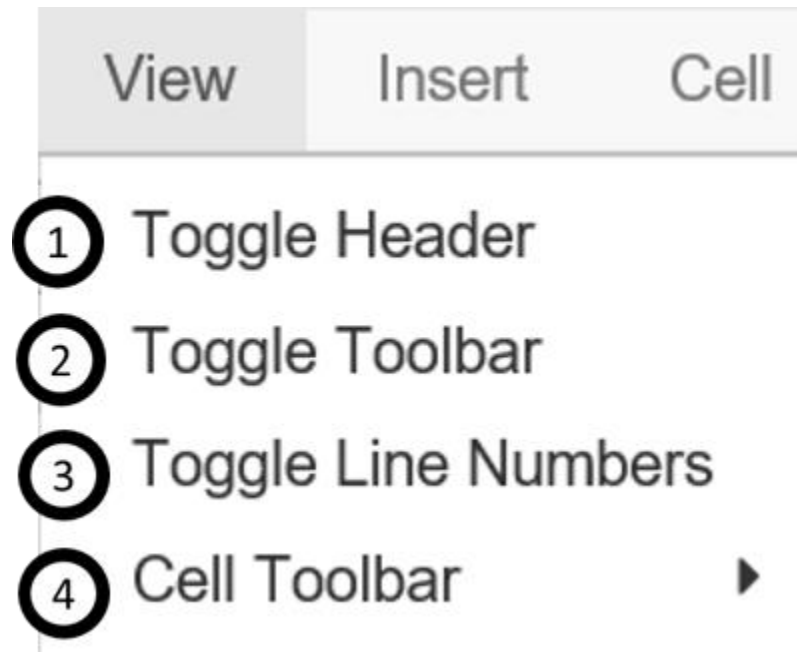
- ① Cut Cells
- ② Copy Cells
- ③ Paste Cells Above
- Paste Cells Below ④
- Paste Cells & Replace ⑤
- ⑥ Delete Cells
- ⑦ Undo Delete Cells
-
- ⑧ Split Cell
- ⑨ Merge Cell Above
- ⑩ Merge Cell Below
-
- Move Cell Up ⑪
- Move Cell Down ⑫

1. Cut the selected Cells to clipboard
2. Copy cells from clipboard to current position
3. Paste cells from clipboard above current cell
4. Paste cells from clipboard below current cell
5. Paste cells from clipboard on top of current cell
6. Delete Cells
7. Revert 'Delete cells' invocation
8. Split up a cell from current position
9. Merge current cell with the one above
10. Merge current cell with the one below
11. Move current cell up
12. Move current cell down



13. Adjust metadata underlying the current notebook
14. Find and replace in selected cells
15. Remove cell attachments
16. Copy attachments of current cell
17. Paste attachments of current cell
18. Insert image in selected cells

View Cells



1. Toggle display of Jupyter logo and filename
2. Toggle display of toolbar
3. Toggle line numbers in cells
4. Toggle display of cell action icons:
 - None
 - Edit metadata
 - Raw cell format
 - Slideshow
 - Attachments
 - Tags

Insert Cells

Insert

Cell

Kern

① Insert Cell Above

② Insert Cell Below

Execute Cells

Cell	Kernel	Widgets
① Run Cells		
② Run Cells and Select Below		
③ Run Cells and Insert Below		
Run All		④
Run All Above		⑤
⑥ Run All Below		
⑦ Cell Type		▶
⑧ Current Outputs		▶
⑨ All Output		▶

1. Add new cell above the current one
2. Add new cell below the current one
1. Run selected cells
2. Run current cells down and create a new one below
3. Run current cells down and create a new one above
4. Run all cells
5. Run all cells above the current cell
6. Run all cells below the current cell

7. Change the cell type of current cell
8. Toggle, toggle scrolling and clear current outputs
9. Toggle, toggle scrolling and clear all output

Magic Commands

Here are some of the commonly used Magic commands in jupyter Notebook.

Statement	Explanation	Example
<code>%magic</code>	Comprehensively lists and explains magic functions	<code>%magic</code>
<code>%automagic</code>	When active, enables you to call magic functions without the ‘%’	<code>%automagic</code>
<code>%quickref</code>	Launch IPython quick reference	<code>%quickref</code>
<code>%time</code>	Times a single statement	In [561]: <code>%time</code> method = [a for a in data if b.startswith(‘http’)]
<code>%pastebin</code>	Pastebins lines from your current session.	<code>%pastebin 3 18-20</code> ~1/1-5
<code>%debug</code>	Enters the interactive debugger	<code>%debug</code>
<code>%hist</code>	Print command input and output history	<code>%hist</code>
<code>%pdb</code>	Automatically enter python debugger after any exception	<code>%pdb</code>
<code>%cpaste</code>	Opens up a special prompt for manually pasting Python code for execution	<code>%cpaste</code>
<code>%reset</code>	Delete all variables and names defined in the current namespace	<code>%reset</code>

<code>%run</code>	Run a python script inside a notebook	<code>%run script.py</code>
<code>%who</code> , <code>%who_ls</code> , <code>%whos</code>	Display variables defined in the interactive namespace, with varying levels of verbosity	<code>%who</code> , <code>%who_ls</code> , <code>%whos</code>
<code>%xdel</code>	Delete a variable in the local namespace. Clear any references to that variable	<code>%xdel variable</code>

Working with Different Programming Languages



Kernels provide computation and communication with front-end interfaces like the notebooks. Installing Jupyter Notebook will automatically install the IPython kernel.

1. Interrupt kernel
2. Restart kernel
3. Interrupt kernel & clear all output
4. Restart kernel & run all cells
5. Connect back to a remote notebook
6. Restart kernel & run all cells
7. Run other installed kernels

Widgets

Widgets

Help

1 Save Notebook Widget State










2 Clear Notebook Widget State

3 Download Widget State

4 Embed Widgets

1. Save notebook with interactive widget
2. Clear notebook with interactive widget
3. Download serialized state of all widget models in use
4. Embed current widgets

Help

- 1 User Interface Tour
- 2 Keyboard Shortcuts
- 3 Edit Keyboard Shortcuts
- 4 Notebook Help 
- 5 Markdown 
- 6 Python Reference 
- 7 IPython Reference 
- 8 NumPy Reference 
- SciPy Reference  9
- Matplotlib Reference  10
- 11 SymPy Reference 
- 12 pandas Reference 
- 13 About

1. Walk through a UI tour
2. List of built-in keyboard shortcuts
3. Edit the built-in keyboard shortcuts
4. Notebook help topics
5. Description of markdown available in notebook
6. Python help topics
7. IPython help topics
8. NumPy help topics
9. SciPy help topics
10. Matplotlib help topics
11. SymPy help topics
12. Pandas help topics
13. About Jupyter Notebook

[Download Jupyter Notebook Cheat Sheet for Python Edureka](#)

With this, we come to an end of **Jupyter Notebook Cheat Sheet**. To get in-depth knowledge, check out our interactive, live-online Edureka **[Python Data Science Certification Training](#)** here, that comes with 24*7 support to guide you throughout your learning period. Edureka's Python course helps you gain expertise in Quantitative Analysis, data mining, and the presentation of data to see beyond the numbers by transforming your career into Data Scientist role. You will use libraries like Pandas, Numpy, Matplotlib, Scikit and master the concepts like Python Machine Learning Algorithms such as Regression, Clustering, Decision Trees, Random Forest, Naïve Bayes and Q-Learning and Time Series.