

Jupyter Notebook Cheatsheet

Keyboard Shortcuts

The following two lists are the keyboard shortcuts that are enabled by default in a Jupyter notebook. If you have edited the configuration of the keyboard shortcuts in your Jupyter Notebook environment, you may view a list of the currently available shortcuts from the Jupyter Help menu.

Command Mode	(press Esc to enable command mode)
Alt-R	Enter/Exit RISE Slideshow
F	find and replace
Shift-C	open the nbconfigurator page for RISE
Shift-F	(un)set current cell as a Fragment cell
Shift-I	(un)set current cell as a Slide cell
Shift-U	(un)set current cell as a Sub-slide cell
Ctrl-Shift-F	open the command palette
Ctrl-Shift-P	open the command palette
Enter	enter edit mode
P	open the command palette
Shift-Enter	run cell, select below
Ctrl-Enter	run selected cells
Alt-Enter	run cell and insert below
Y	change cell to code
M	change cell to Markdown
R	change cell to raw
1	change cell to heading 1
2	change cell to heading 2
3	change cell to heading 3
4	change cell to heading 4
5	change cell to heading 5
6	change cell to heading 6
K	select cell above
Up	select cell above
Down	select cell below
J	select cell below
Shift-K	extend selected cells above
Shift-Up	extend selected cells above
Shift-Down	extend selected cells below
Shift-J	extend selected cells below
A	insert cell above
В	insert cell below
X	cut selected cells
С	copy selected cells
Shift-V	paste cells above
V	paste cells below

```
undo cell deletion
           D,D
                 delete selected cells
     Shift-M
                 merge selected cells, or current cell with cell below if only one cell is selected
       Ctrl-S
                 Save and Checkpoint
                 Save and Checkpoint
              L
                 toggle line numbers
                 toggle output of selected cells
     Shift-O
                 toggle output scrolling of selected cells
                 show keyboard shortcuts
           I,I
                 interrupt the kernel
           0,0
                 restart the kernel (with dialog)
           Esc
                 close the pager
                 close the pager
     Shift-L
                 toggles line numbers in all cells, and persist the setting
Shift-Space
                 scroll notebook up
        Space | scroll notebook down
```

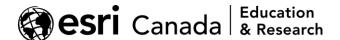
Edit Mode | (press Enter to enable to enter edit mode in a cell)

code completion or indent

	100.11
Ctrl-]	indent
Ctrl-[dedent
Ctrl-A	select all
Ctrl-Z	undo
Ctrl-/	comment
Ctrl-D	delete whole line
Ctrl-U	undo selection
Insert	toggle overwrite flag
Ctrl-Home	go to cell start
Ctrl-Up	go to cell start
Ctrl-End	go to cell end
Ctrl-Down	go to cell end
Ctrl-Left	go one word left
Ctrl-Right	go one word right
Ctrl-Backspace	delete word before
Ctrl-Delete	delete word after
Ctrl-Y	redo
Alt-U	redo selection
Ctrl-M	enter command mode
Ctrl-Shift-F	open the command palette
Ctrl-Shift-P	open the command palette
Esc	enter command mode
Shift-Enter	run cell, select below
Ctrl-Enter	run selected cells
Alt-Enter	run cell and insert below
Ctrl-Shift-Minus	split cell at cursor
Ctrl-S	Save and Checkpoint
Down	move cursor down
qU	move cursor up

Tab

Shift-Tab tooltip



Markdown

This is a list of common syntax used in Markdown cells in a Jupyter notebook to produce rich formatted text and embedded multimedia. To see the rendered output for these examples, you can open any Jupyter notebook, start editing a Markdown cell, insert the sample text, and execute the cell to view the formatted output (e.g., by pressing CTRL+Enter). A copy of these samples can be found on GitHub (some github-specific features are not supported): https://guides.github.com/pdfs/markdown-cheatsheet-online.pdf

Headings

```
# This is an <h1> tag
## This is an <h2> tag
###### This is an <h6> tag
```

Emphasis

```
*This text will be italic*
_This will also be italic_
**This text will be bold**
_This will also be bold_
*You **can** combine them*
```

Blockquotes

As Nicholas Chrisman said:
> Geographers never get lost. They
> just do accidental field work.

Unordered Lists

```
* Unordered Item 1
* Unordered Item 2
* Unordered Item 2a
* Unordered Item 2b
```

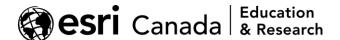
Ordered Lists

```
    Ordered Item 1
    Ordered Item 2
    Ordered Item 3
    Ordered Item 3a
    Ordered Item 3b
```

Images (linked)

```
![Logo](images/logo.png)
Format: ![Alt Text](url)
```

The URL portion for an image may be a full path to an Internet-accessible location (e.g., https://esri.ca/images/logo.png), or a path to a location accessible relative to your local notebook server (e.g., a path that points to images/logo.png will work if there an images folder within the same path as your notebook, with a logo.png file inside it).



Images (embedded)

To ensure your notebooks are easy to share, and are not subject to broken links or missing files, you may embed images directly into your notebook file. You can do this while editing a Markdown cell in your notebook by opening the 'Edit' menu and selecting 'Insert image'. In the prompt that is displayed, choose an image from your files and click 'OK'. The image will be stored internally in the notebook file within the current cell, and Markdown will be inserted into the text. When you execute the cell (e.g., by pressing CTRL+Enter), the image will be displayed in the rendered output.

Below is an example of the syntax that you will see inserted into your Markdown cell when embedding an image this way:

```
![example_image.jpg](attachment:example_image.jpg)
```

Links

```
http://github.com - automatic!
[GitHub] (http://github.com)
```

Code (inline)

Snippets of code can be displayed inline, enclosed in single backticks - for example, to emphasize references to things like `variable_names` within your text.

Code (blocks)

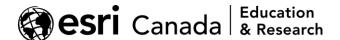
Longer blocks of code can be enclosed by two lines with triple backticks (without any trailing spaces). If using a well-known language, the first set of backticks can be followed by the name of the language. For example, js or javascript following the backticks will render the following with code-style text that highlights elements of the code with different colours (e.g., core syntax words, variables, numbers, text strings):

```
```js
function test() {
 console.log("sample javascript code");
}
```
```

Task lists

```
    [x] this is a complete item
    [ ] this is an incomplete item
    [x] [links](), **formatting**, and basic HTML <del>tags</del> are supported
    [x] list syntax required (any unordered or ordered list supported)
```

Tables



Simple HTML formatting

Escape characters

Use backslashes to escape any of the following characters in your Markdown syntax:

```
\ backslash
   backtick

* asterisk
   underscore
{} curly braces
[] square brackets
() parentheses
# hash mark
+ plus sign
- minus sign (hyphen)
. dot
! exclamation mark
```

Equations

```
Text enclosed by single `$` characters will be displayed as inline math formulas, for example: $ArcGIS + Python + Jupyter = \( \mathbb{X} \)$$

When double `$$` characters enclose a formula, it will be displayed as an equation on a separate line: $$ArcGIS + Python + Jupyter = \( \mathbb{X} \)$$$
```

Examples of equations using LaTeX syntax:

```
\$\$
F(k) = \inf_{-\inf y}^{\inf y} f(x) e^{2\pi i k} dx
\$\$
```

```
$$
\begin{align}
\nabla \times \vec{\mathbf{B}} -\, \frac1c\, \frac{\partial\vec{\mathbf{E}}}{
\partial t} & = \frac{4\pi}{c}\vec{\mathbf{j}} \\
\nabla \cdot \vec{\mathbf{E}} & = 4 \pi \rho \\
\nabla \times \vec{\mathbf{E}}\, +\, \frac1c\, \frac{\partial\vec{\mathbf{B}}}{
\partial t} & = \vec{\mathbf{0}} \\
\nabla \cdot \vec{\mathbf{B}} & = 0
\end{align}
$$
```



IPython display Module

The IPython display module provides a variety of methods for inserting content into a notebook. Full documentation is online: https://ipython.readthedocs.io/en/stable/api/generated/IPython.display.html

Below are a few simple examples:

YouTube Video

```
from IPython.display import YouTubeVideo
YouTubeVideo(id="lXYFhgntmjg", width=800, height=450)
```

HTML

```
from IPython.display import HTML
HTML("<a class=\"sample\">Some HTML content!</a>"
    "<style>"
        ".sample:hover {color:magenta; cursor:pointer}"
    "</style>")
```

JavaScript

```
from IPython.display import Javascript
Javascript("alert(\"Hello World!\");")
```

© 2020 Esri Canada. All rights reserved. Trademarks provided under license from Environmental Systems Research Institute Inc. Other product and company names mentioned herein may be trademarks or registered trademarks of their respective owners. Errors and omissions excepted.

This work is licensed under a <u>Creative Commons Attribution-NonCommercial-ShareAlike 4.0</u> <u>International License</u>. The Education and Research Group at Esri Canada makes every effort to present accurate and reliable information. The Web sites and URLs used in this tutorial are from sources that were current at the time of production but are subject to change without notice to Esri Canada.

