

Jupyter Notebook files

You can create content with Jupyter notebooks. For example, the content for the current page is contained in {download}this notebook file <./notebooks.ipynb>.

{margin}

If you'd like to write in plain-text files, but still keep a notebook structure, you can write

Jupyter notebooks with MyST Markdown, which are then automatically converted to notebooks.

See [](./myst-notebooks.md) for more details.

Jupyter Book supports all Markdown that is supported by Jupyter Notebook. This is mostly a flavour of Markdown called CommonMark Markdown with minor modifications. For more information about writing Jupyter-flavoured Markdown in Jupyter Book, see .

Code blocks and image outputs

Jupyter Book will also embed your code blocks and output in your book. For example, here's some sample Matplotlib code:

```
[1]: from matplotlib import rcParams, cycler
import matplotlib.pyplot as plt
import numpy as np
plt.ion()

<contextlib.ExitStack at 0x22bfe5f6610>

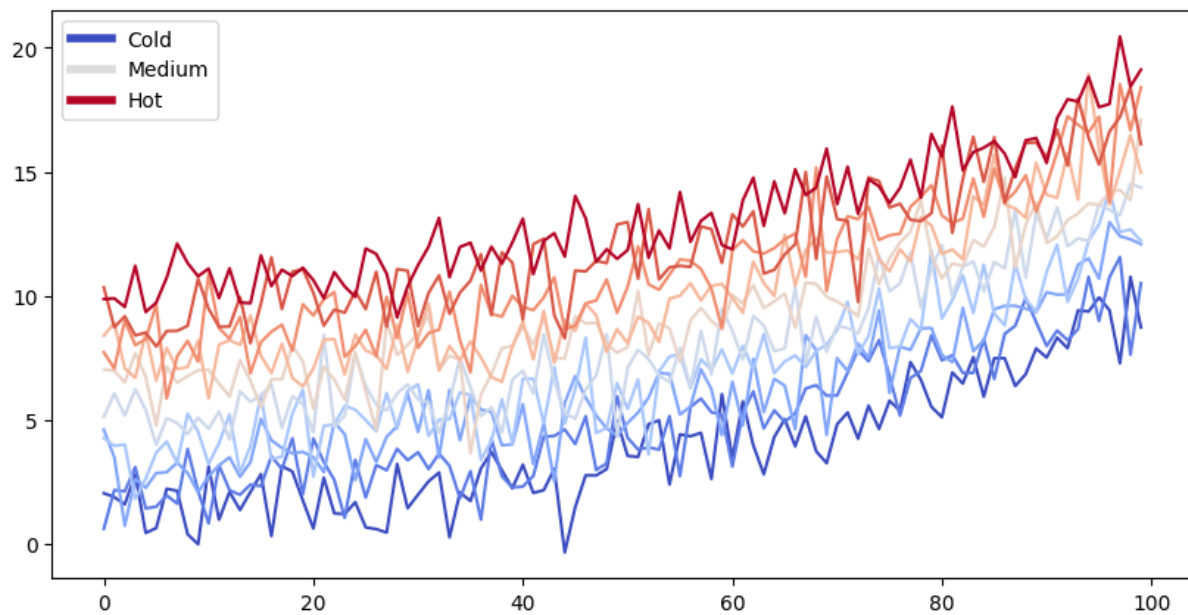
# Fixing random state for reproducibility
np.random.seed(19680801)

N = 10
data = [np.logspace(0, 1, 100) + np.random.randn(100) + ii for ii in range(N)]
data = np.array(data).T
cmap = plt.cm.coolwarm
rcParams['axes.prop_cycle'] = cycler(color=cmap(np.linspace(0, 1, N)))

from matplotlib.lines import Line2D
custom_lines = [Line2D([0], [0], color=cmap(0.), lw=4),
                 Line2D([0], [0], color=cmap(.5), lw=4),
                 Line2D([0], [0], color=cmap(1.), lw=4)]

fig, ax = plt.subplots(figsize=(10, 5))
lines = ax.plot(data)
ax.legend(custom_lines, ['Cold', 'Medium', 'Hot']);

[2]:
```



Note that the image above is captured and displayed in your site.

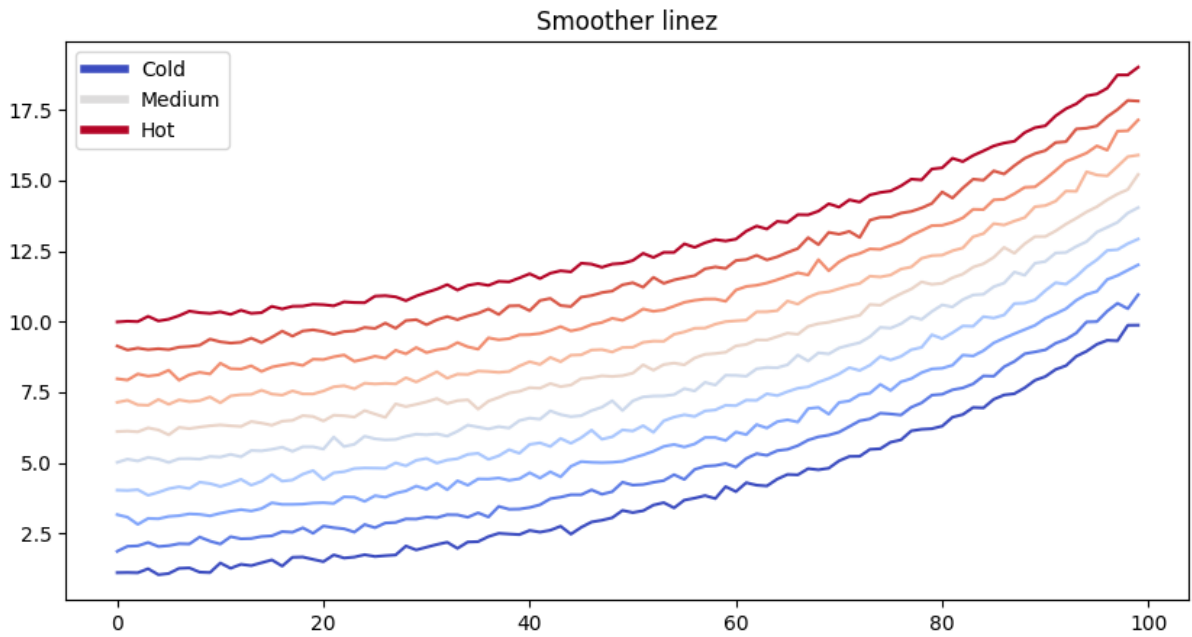
```
# Fixing random state for reproducibility
np.random.seed(19680801)

N = 10
data = [np.logspace(0, 1, 100) + .1*np.random.randn(100) + ii for ii in range(N)]
data = np.array(data).T
cmap = plt.cm.coolwarm
rcParams['axes.prop_cycle'] = cycler(color=cmap(np.linspace(0, 1, N)))

from matplotlib.lines import Line2D
custom_lines = [Line2D([0], [0], color=cmap(0.), lw=4),
                 Line2D([0], [0], color=cmap(.5), lw=4),
                 Line2D([0], [0], color=cmap(1.), lw=4)]

fig, ax = plt.subplots(figsize=(10, 5))
lines = ax.plot(data)
ax.legend(custom_lines, ['Cold', 'Medium', 'Hot'])
ax.set(title="Smoother linez")
```

```
[Text(0.5, 1.0, 'Smoother linez')]
```



{margin}

For more information on how to do this,
check out the {ref}`layout/sidebar` section.

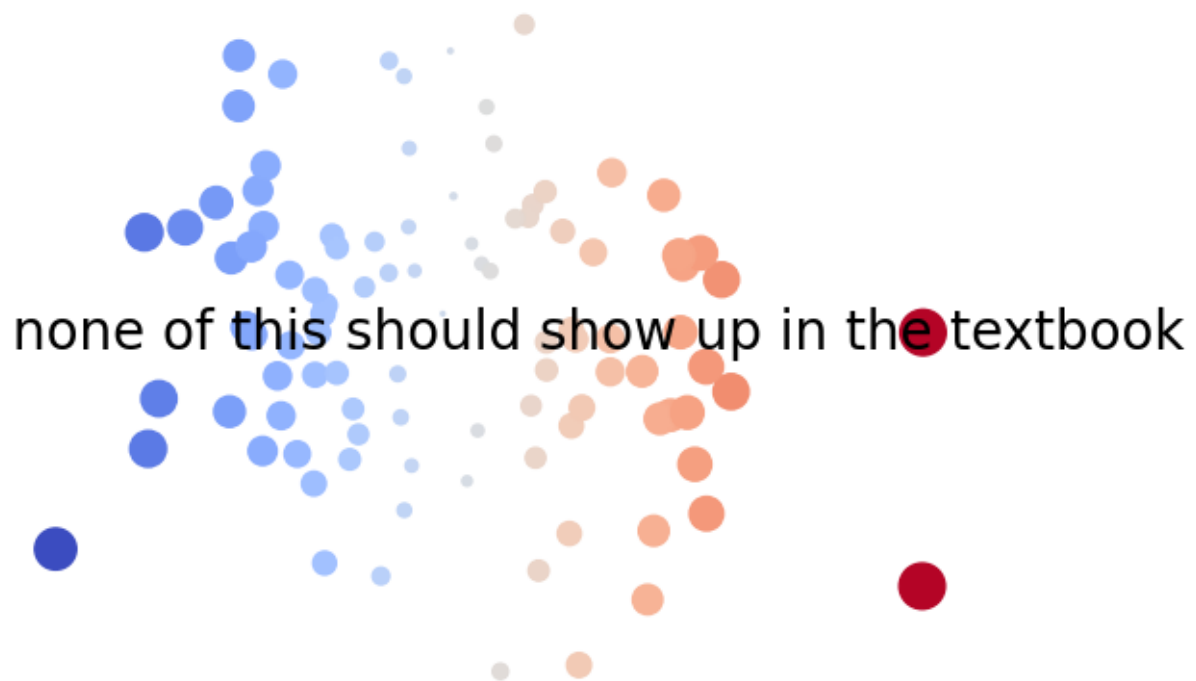
Removing content before publishing

You can also remove some content before publishing your book to the web. For reference,
{download}you can download the notebook content for this page <notebooks.ipynb>.

```
thisvariable = "none of this should show up in the textbook"

fig, ax = plt.subplots()
x = np.random.randn(100)
y = np.random.randn(100)
ax.scatter(x, y, s=np.abs(x*100), c=x, cmap=plt.cm.coolwarm)
ax.text(0, .5, thisvariable, fontsize=20, transform=ax.transAxes)
ax.set_axis_off()
```

[4]:



You can **remove only the code** so that images and other output still show up.

```
[5]: thisvariable = "this plot *will* show up in the textbook."

fig, ax = plt.subplots()
x = np.random.randn(100)
y = np.random.randn(100)
ax.scatter(x, y, s=np.abs(x*100), c=x, cmap=plt.cm.coolwarm)
ax.text(0, .5, thisvariable, fontsize=20, transform=ax.transAxes)
ax.set_axis_off()
```



this plot *will* show up in the textbook.

Which works well if you'd like to quickly display cell output without cluttering your content with code. This works for any cell output, like a Pandas DataFrame.

```
[6]: import pandas as pd
      pd.DataFrame([[ 'hi', 'there'], [ 'this', 'is'], [ 'a', 'DataFrame']], columns=[ 'Word A', 'Word B'])
```

| | Word A | Word B |
|---|--------|-----------|
| 0 | hi | there |
| 1 | this | is |
| 2 | a | DataFrame |

See [{ref}hiding/remove-content](#) for more information about hiding and removing content.

Interactive outputs

We can do the same for *interactive* material. Below we'll display a map using folium. When your book is built, the code for creating the interactive map is retained.

```
{margin}
**This will only work for some packages.** They need to be able to output standalone
HTML/Javascript, and not
depend on an underlying Python kernel to work.
```

```
import folium
m = folium.Map(
    location=[45.372, -121.6972],
    zoom_start=12,
    tiles='Stamen Terrain'
```

