

# Welcome to IB-Tech

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### IT Management

- Ethics of management
- Try coding
- Step-by-step

### AI and Machine Learning

- Test models
- Deep Learning in practice
- Explainable AI

### Cybersecurity

- Toolkits
- Cyber and AI
- Hack@thon!

This is a website for getting started the chapters of IB-Tech.

## Ethics of management

Whether you write your book's content in Jupyter Notebooks ( `.ipynb` ) or in regular markdown files ( `.md` ), you'll write in the same flavor of markdown called **MyST Markdown**. This is a simple file to help you get started and show off some syntax.

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# What is MyST?

MyST stands for “Markedly Structured Text”. It is a slight variation on a flavor of markdown called “CommonMark” markdown, with small syntax extensions to allow you to write **roles** and **directives** in the Sphinx ecosystem.

For more about MyST, see [the MyST Markdown Overview](#).

## Sample Roles and Directives

Roles and directives are two of the most powerful tools in Jupyter Book. They are like functions, but written in a markup language. They both serve a similar purpose, but **roles are written in one line**, whereas **directives span many lines**. They both accept different kinds of inputs, and what they do with those inputs depends on the specific role or directive that is being called.

Here is a “note” directive:

### Note

Here is a note

It will be rendered in a special box when you build your book.

Here is an inline directive to refer to a document: [Step-by-step](#).

## Citations

You can also cite references that are stored in a `bibtex` file. For example, the following syntax:

`{cite}`holdgraf_evidence_2014`` will render like this: [HdHPK14](#).

Moreover, you can insert a bibliography into your page with this syntax: The `{bibliography}` directive must be used for all the `{cite}` roles to render properly. For example, if the references for your book are stored in `references.bib`, then the bibliography is inserted with:

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## Learn more

This is just a simple starter to get you started. You can learn a lot more at [jupyterbook.org](http://jupyterbook.org).

## Try coding

You can also create content with Jupyter Notebooks. This means that you can include code blocks and their outputs in your book.

## Markdown + notebooks

As it is markdown, you can embed images, HTML, etc into your posts!



# Markedly Structured Text

You can also  $add_{math}$  and

[Skip to main content](#)

$math^{blocks}$

or

$meanla_{tex}$

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But make sure you \$Escape \$your \$dollar signs \$you want to keep!

## MyST markdown

MyST markdown works in Jupyter Notebooks as well. For more information about MyST markdown, check out [the MyST guide in Jupyter Book](#), or see [the MyST markdown documentation](#).

## Code blocks and outputs

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

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

```
-----
ModuleNotFoundError                                Traceback (most recent call last)
Cell In[1], line 1
----> 1 from matplotlib import rcParams, cycler
      2 import matplotlib.pyplot as plt
      3 import numpy as np

ModuleNotFoundError: No module named 'matplotlib'
```

[Skip to main content](#)

```
# 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']);
```

There is a lot more that you can do with outputs (such as including interactive outputs) with your book. For more information about this, see [the Jupyter Book documentation](#)

## Step-by-step

Jupyter Book also lets you write text-based notebooks using MyST Markdown. See [the Notebooks with MyST Markdown documentation](#) for more detailed instructions. This page shows off a notebook written in MyST Markdown.

## An example cell

With MyST Markdown, you can define code cells with a directive like so:

```
print(2 + 2)
```

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When your book is built, the contents of any `{code-cell}` blocks will be executed with your default Jupyter kernel, and their outputs will be displayed in-line with the rest of your content.

[Skip to main content](#)

## See also

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# Create a notebook with MyST Markdown

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