

Introduction to Markdown in Jupyter Notebooks

Dr. Khaled Mohamad

Markdown is a simple text formatting language you can use inside Jupyter Notebooks to make your notes, explanations, and documentation clearer.

In Jupyter, you can write Markdown by selecting a cell and changing it from Code to Markdown in the toolbar.

1. Headings

You can create titles and subtitles using `#`.

```
# Heading 1  
## Heading 2  
### Heading 3
```

Example:

Heading 1

Heading 2

Heading 3

Center Heading

- **Method 1:**

```
<div align="center">
```

```
# Centered Heading
```

```
</div>
```

Example:

Centered Heading

- **Method 2:**

```
<h1 align="center">Centered Heading</h1>
```

Example:

Centered Heading

2. Emphasis (Bold & Italics)

bold text

italic text

Example:

This is bold

This is italic

3. Lists

Unordered List (bullets)

- Item 1
- Item 2
 - Sub-item

Example:

- Item 1
- Item 2

- Sub-item

Ordered List (numbered)

1. First
2. Second
3. Third

Example:

1. First
2. Second
3. Third

4. Links and Images

Hyperlinks

[KBTU](<https://kbtu.edu.kz/en/>)

Example: [KBTU](#)

Images

Basic Syntax for view an image

- **link from internet**

![text](<https://jupyter.org/assets/homepage/main-logo.svg>)

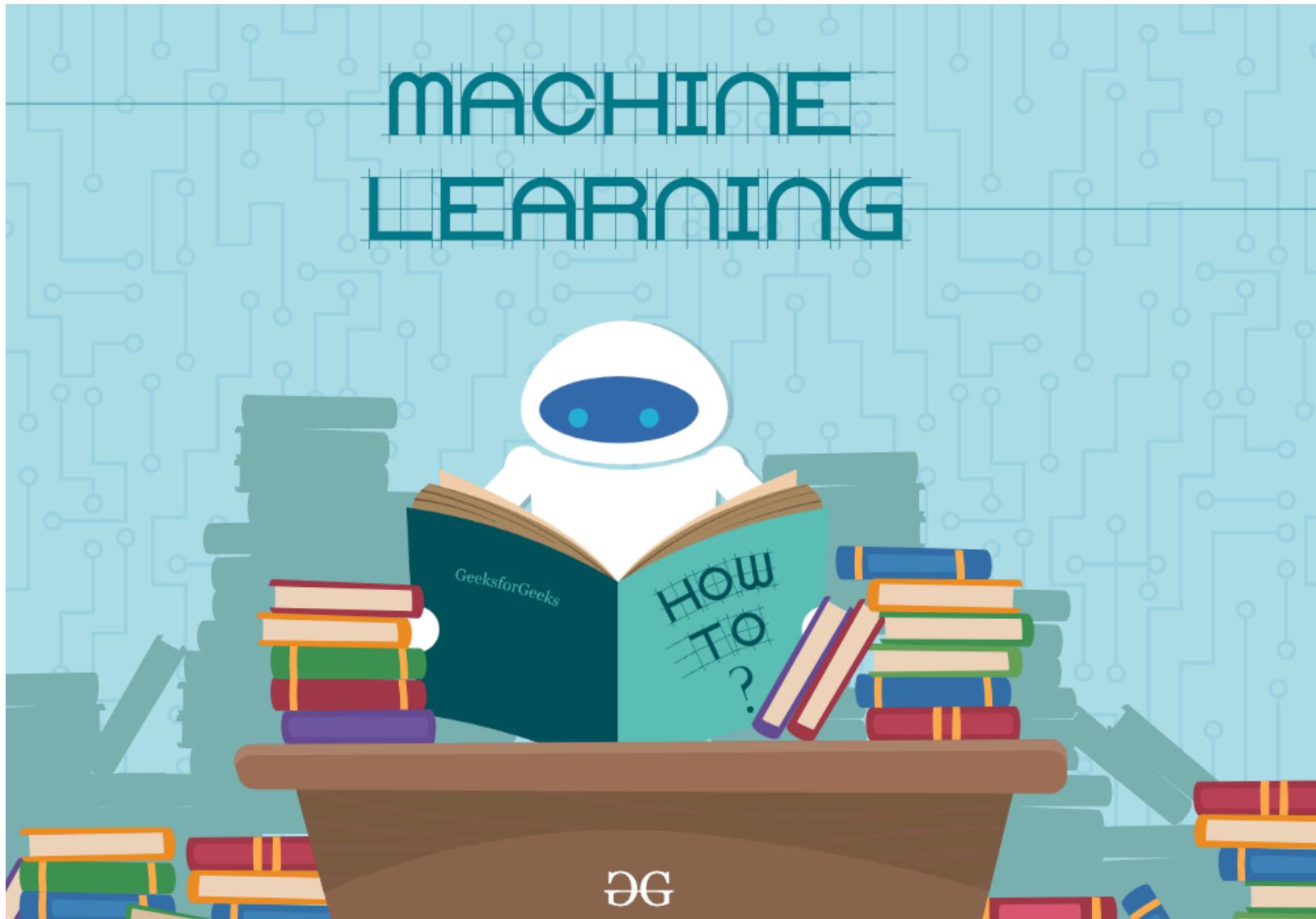
Example:



- **Saved in your drive** (you may provide the image path or put it in the same folder as your notebook)

![text](machineLearningp_pic.png)

Example:

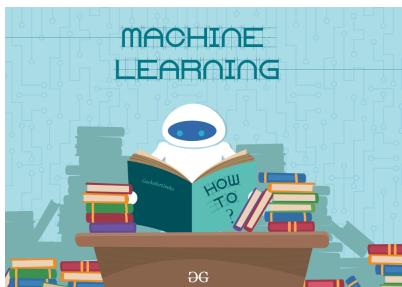


- **Resizing Images** (using HTML inside Markdown)

```

```

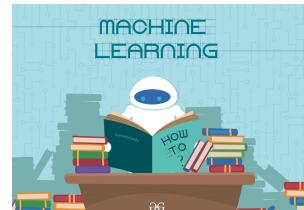
Example:



- Aligning Images and Text Side by Side

```
<table>
<tr>
<td></td>
<td>This image represents how robot is learning.</td>
</tr>
</table>
```

Example:



This image represents how robot is learning.

- Images Side by Side

```
<p align="center">



</p>
```

Example:



5. Code Formatting

Inline code

Use the `print()` function.

Example: Use the `print()` function.

Code blocks

```
```python
def hello():
 print("Hello, Jupyter!")
```

Example:

```
```python
def hello():
    print("Hello, Jupyter!")
```

6. Tables

Name	Age	Country
Alice	23	USA
Bob	25	UK

Example:

Name	Age	Country
Alice	23	USA
Bob	25	UK

7. Horizontal Line (Divider)

Example:

8. Blockquotes

- > This is a blockquote.
- > It is often used to highlight notes or tips.

Example:

This is a blockquote.
It is often used to highlight notes or tips.

9. Nested Lists

1. Python
 - Data Science
 - Web Development
2. JavaScript
 - Frontend
 - Backend

Example:

1. Python
 - Data Science
 - Web Development

2. JavaScript

- Frontend
- Backend

10. Mathematical Expressions (LaTeX)

Jupyter supports **LaTeX equations** inside Markdown cells.

Inline math:

This is an inline formula: $E = mc^2$

Block math:

```
$$\int_0^1 x^2 dx = \frac{1}{3}$$
```

Example:

This is an inline formula: $E = mc^2$

$$\int_0^1 x^2 dx = \frac{1}{3}$$

11. Strikethrough

~~This text is crossed out~~

Example:

~~This text is crossed out~~

12. Task Lists (Checkboxes)

- [x] Learn Markdown
- [] Practice Markdown
- [] Become a Markdown pro

Example:

- Learn Markdown
- Practice Markdown
- Become a Markdown pro

13. HTML Support (for advanced formatting)

Jupyter's Markdown also supports raw HTML.

```
<p style="color:blue;">This text is blue</p>
```

Example:

This text is blue

14. Emojis & Icons 🎉

You can add emotions and icons (emojis) in Jupyter **just by typing or copy-pasting them** into a Markdown cell — no special code needed.

Copy-Paste Method

Here are some useful emojis you can copy and paste into your notebook:



Example in Markdown:

```
# 💾 My Goals  
I feel 😊 about learning Markdown!  
I will 🚀 become better every day.
```

Output:

🎯 My Goals

I feel 😊 about learning Markdown!

I will 🚀 become better every day.

Typing Emojis (Keyboard Shortcuts)

- **Windows:** Press `Win + .` (Windows key + period) → emoji picker will appear.
 - **Mac:** Press `Control + Command + Space` → emoji picker will appear.
 - **Linux:** Press `Ctrl + .` or `Ctrl + ;` (varies based on the version type).
-

Mix with Text

```
## ✅ To-Do List
- [x] Learn Markdown 😊
- [ ] Practice LaTeX 12
- [ ] Add icons 🚀
```

Output:

✅ To-Do List

- Learn Markdown 😊
 - Practice LaTeX 12
 - Add icons 🚀
-

In []: