

Operations Research

02. Jupyter Notebook: Markdown & L^AT_EX

Jupyter Notebook Setup

- Before installation: check your `python` setup
 - `python` or `python3`
 - `pip` or `pip3`
- Installation: `pip install notebook`
- Execute in shell: `jupyter notebook` or `jupyter lab` (new)
- Open notebooks from the command line: `pip install nbopen`
Double-click integration with file manager:
 - Linux / BSD: `python3 -m nbopen.install_xdg`
 - Windows: `python3 -m nbopen.install_win`
 - Mac: Clone the [nbopen](#) repository
and run `./osx-install.sh`

Markdown I

- headings: use # followed by a blank space for notebook titles and section headings
 - # for titles
 - ## for major headings
 - ### for subheadings
 - #### for 4th level subheadings
- emphasis: use the following to emphasize text
 - bold text: `__string__` or `**string**`
 - italic text: `_string_` or `*string*`
- mathematical symbols using (a subset of) \LaTeX
- many [html elements](#) are valid

Markdown II

- monospace font: for commands and quoted file paths and names
 - surrond text with ```, like ``python``
- bullets: `-` or `*` followed by one or two spaces
 - e.g. `- this is an item`
 - sub bullets: proper indentation w.r.t parent bullets
- numbered lists: `1.` followed by a space
 - e.g. `1.this is a numbered item`
 - sub numbered lists: proper indentation w.r.t parent lists
- force a line break using `
`
- quoting using `>` followed by a space

Markdown III

- link
 - internal: put `` before, then `[section title](#section_id)`
 - external: `__[link text](http://url)__`
- colored boxes

```
<div class='alert alert-block <type>'>...</div>
```

with `<type>` are the followings:
 - `alert-info`
 - `alert-warning`
 - `alert-success`
 - `alert-danger`
- horizontal line with `***`

Markdown IV

- table example: note the alignment and L^AT_EX formula

```
| column 1 | column 2 | column 3 |
|:-:|:-|:-:|
| 1 | 20 | 305 |
| alpha | beta | gamma ray |
|  $\frac{2}{3}$  |  $\int_0^1 e^{-x} dx$  |  $\pi$  |
```

- UTF-8 geometrical shapes: `&#<dec/hex code>;`
- images
 - image url: `![text] (URL-or-PATH-to-image)`
 - local file: under the same folder or be descendent
 - for best size, using raw html
`<image src='path' alt='text' width='300' />`