## Machine Learning

# Jupyter Notebook (64 bit) – Mode based editor(Intractive -Command or Edit Mode)

**Cell** – every execution will be provided with unique number and order of creation.

**Switch** **mode** – esc to command mode, Enter to return to Edit mode on current cursor

**Navigation** – Use up or down arrow on the page to scroll

## Keyboard Navigation

The modal user interface of the IPython Notebook has been optimized for efficient keyboard usage. This is made possible by having two different sets of keyboard shortcuts: one set that is active in edit mode and another in command mode.

The most important keyboard shortcuts are Enter, which enters edit mode, and Esc, which enters command mode.

In edit mode, most of the keyboard is dedicated to typing into the cell's editor. Thus, in edit mode there are relatively few shortcuts. In command mode, the entire keyboard is available for shortcuts, so there are many more. The Help->Keyboard Shortcuts dialog lists the available shortcuts.

We recommend learning the command mode shortcuts in the following rough order:

1. Basic navigation: enter, shift-enter, up/k, down/j
2. Saving the notebook: s
3. Cell types: y, m, 1-6, t
4. Cell creation: a, b
5. Cell editing: x, c, v, d, z, shift+cell editing commands
6. Kernel operations: i, .

**Cells can be creted in in two modes:**

1. Typing pyton programming – used for programming – Tyep y ton cursor to switch to programming mode.

#### **Command Mode (press Esc to enable)Edit Shortcuts**

F: find and replace

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

Ctrl-A: select all cells

A: insert cell above

B: insert cell below

X: cut selected cells

C: copy selected cells

Shift-V: paste cells above

V: paste cells below

Z: 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

S: Save and Checkpoint

L: toggle line numbers

O: toggle output of selected cells

Shift-O: toggle output scrolling of selected cells

H: show keyboard shortcuts

I,I: interrupt the kernel

0,0: restart the kernel (with dialog)

Esc: close the pager

Q: 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)**

Tab: code completion or indent

Shift-Tab: tooltip

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

Up: move cursor up

1. Markdown symbol – to build document, will not be used for calculation or programming- Press M to switch to this mode.
   1. Title – starts with #(highest level)
   2. Title – starts with ##(2nd highest level)
   3. Title – starts with ###(3rd highest level)

## <https://www.youtube.com/watch?v=r-uOLxNrNk8>

Jupyter Notebook Vs Jupyter Lab <https://www.youtube.com/watch?v=NSiPeoDpwuI>

Profile setup & SSL setup

**!ipython profile locate my\_profile**

* + **How to install not found python module?**

import sys

!{sys.executable} -m pip install pandas

**Packages are usually installed using pip. You can use pip in many ways, such as :**

1. Directly in your jupyter notebook by writing the following command:

!pip install pandas

this will save/install pandas in your default system path.

1. Using command prompt

pip install pandas

**Run bash command from cell**

Use ! followed by bash command

Ex:

!pip list

!pip install pandas

**Run Magic command**

% lsmagic

%ls

%pwd

%ls -al

%HTML

%timeit