
Modern NLP

**Based on Deep Learning and Language models.
Day 1 Morning**



1st Day

1. Morning (~ 2h)

- } ML – IA – NLP – A gentle introduction
- } Python, Anaconda, Jupyter, Git, Github : All the tools you need
- } Python & Strings 101 – A very small remainder

2. Afternoon (~ 4h)

- } ML 101 – A very first implementation
- } Text Processing – From words to vectors
- } Basic and Advanced NLP techniques

First ... Let's Talk !

About You and Me

Any Business ideas, techs projects to bring in ?

1. Achille & Felic => Chat Bot
2. Kewin => trading bot using Twitter
3. =>We need to find a new project
4. =>We need to find a new project
5. =>We need to find a new project

10 richest vs 10 biggest companies

https://en.wikipedia.org/wiki/The_World%27s_Billionaires

https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization

Who is this guy ?

1. My great great great grandfather
2. Just a random guy
3. Alan Turing
4. Nobody, He was created by some random AI tool



About Tech. Culture & Knowledge

1. AI
2. Machine Learning
3. Data Science
4. Deep learning
5. NLP
6. GPT
7. Robotics
8. Supervized
9. Reinforcement Learning
10. Skynet
11. Alphago
12. Deep Blue

Tools

Google Colab

Tools Help



+ Code

+ Text

Copy to Drive

Connect



Use Gemini and ChatGPT to learn from two capable teachers

Use Google's latest model release, Gemini, to teach you what you want to know and compare those with ChatGPT's responses.

The models are specifically prompted not to generate extra text to make it easier to compare any differences.

> Configure Gemini API key



`gemini_api_secret_name:` "GOOGLE_API_KEY"

[Show code](#)

> Configure OpenAI API key

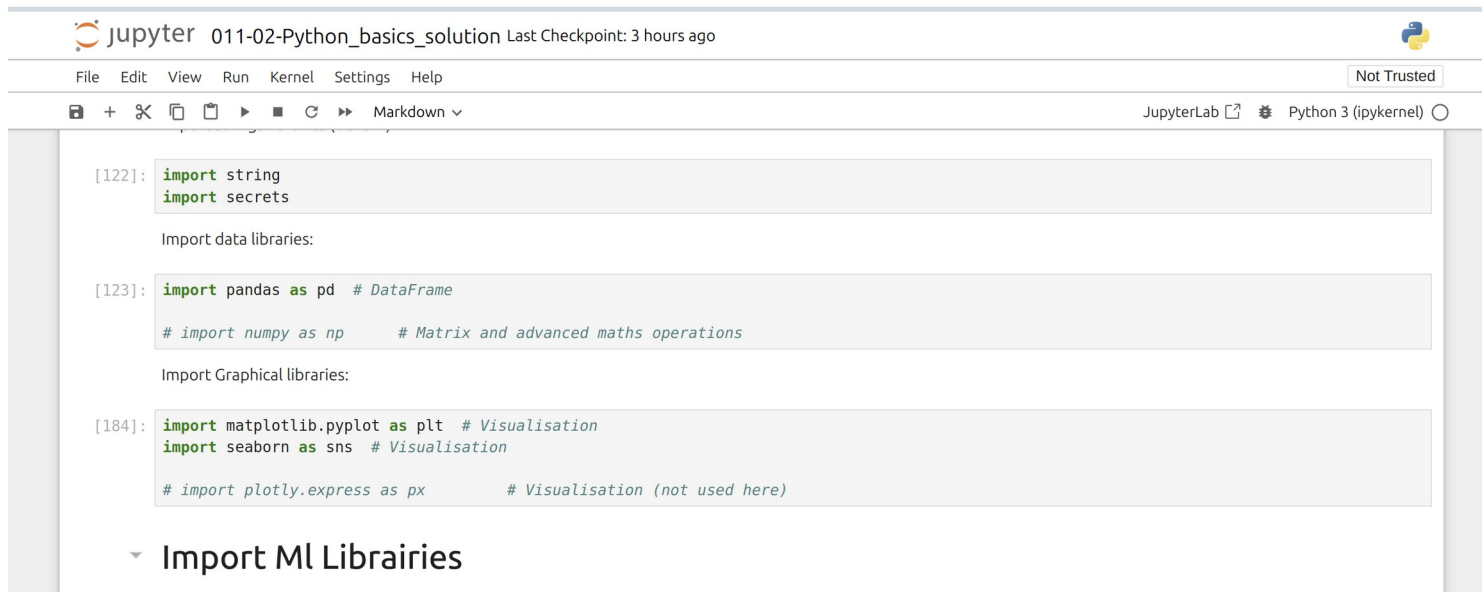


`openai_api_secret_name:` "OPENAI_API_KEY"

[Show code](#)

> Ask a question!

Anaconda & JupyterLab



The screenshot shows the JupyterLab interface with the following elements:

- Header:** "jupyter 011-02-Python_basics_solution Last Checkpoint: 3 hours ago" and a Python logo.
- Menu Bar:** File, Edit, View, Run, Kernel, Settings, Help.
- Toolbar:** Includes icons for file operations and a "Not Trusted" badge.
- Code Editor:** Contains three code cells with the following content:
 - Cell [122]:

```
import string
import secrets
```

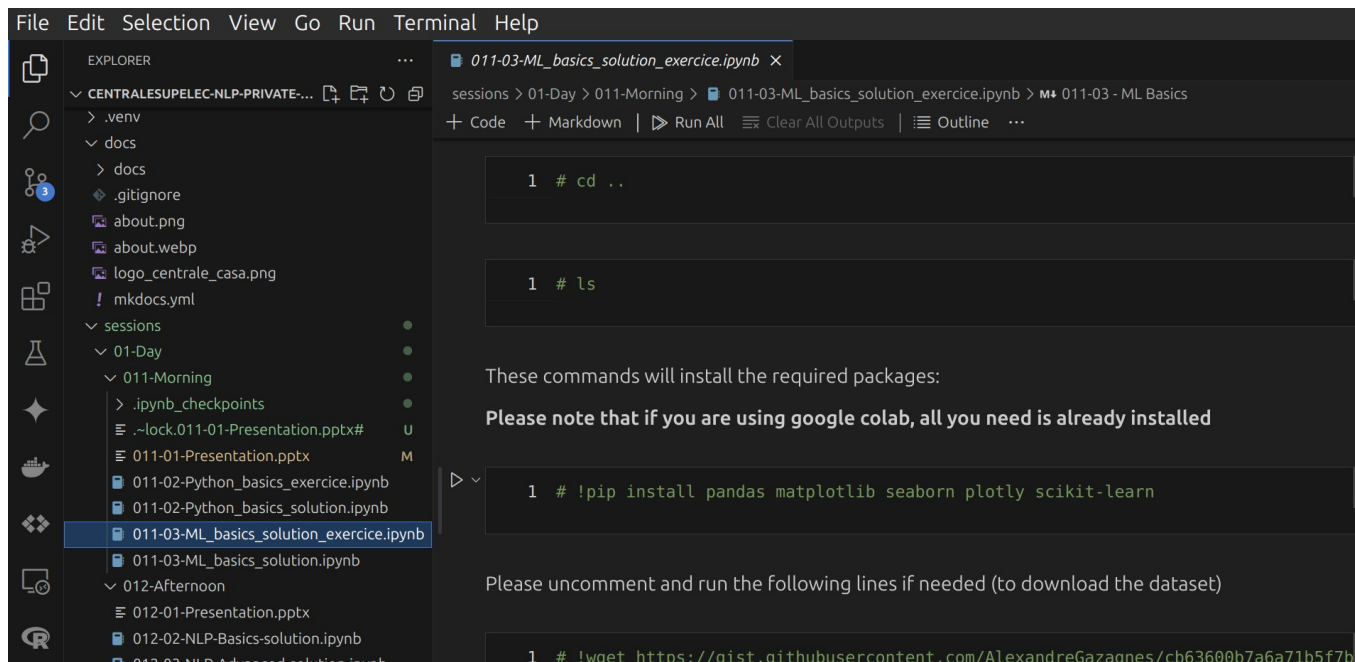
Import data libraries:
 - Cell [123]:

```
import pandas as pd # DataFrame
# import numpy as np # Matrix and advanced maths operations
```

Import Graphical libraries:
 - Cell [184]:

```
import matplotlib.pyplot as plt # Visualisation
import seaborn as sns # Visualisation
# import plotly.express as px # Visualisation (not used here)
```
- Bottom Bar:** Shows "JupyterLab" and "Python 3 (ipykernel)".
- Footer:** A dropdown menu is open, showing "Import ML Librairies".

VS Code & PyCharm (most advanced users)





Creating .venv with virtualenv / venv + pip *

```
alex@asus2023 /tmp/hello
$ python3.11 -m venv .venv
alex@asus2023 /tmp/hello
$ source .venv/bin/activate
(.venv) alex@asus2023 /tmp/hello
$ pip install pandas #MY-EXTERNAL-PACKAGE
Collecting pandas
  Downloading pandas-2.2.2-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_
```


```
(.venv) alex@asus2023 /tmp/hello
$ pip install -r requirements.txt
```


* => Better : <https://python-poetry.org>



Git & GitHub

 AlexandreGazagnes / CentraleSupElec-NLP-Private-Ressources 

[code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Security](#) [Insights](#) [Settings](#)

 **CentraleSupElec-NLP-Private-Ressources** Private Unwatch 1


 main ▾


 1 Branch  0 Tags






t

[Add file](#) ▾

[Code](#) ▾

 **AlexandreGazagnes** update

662766d · 39 minutes ago  8 Commits

 .github/workflows	update	5 hours ago
 .utils	update	5 hours ago
 docs	update	5 hours ago
 sessions	update	39 minutes ago
 tests	update	5 hours ago

Python & Strings – 101

Practice !
