

CHOCOLATE CHIP MUFFIN: PROGRAMMING BASICS FOR MACHINE LEARNING



LESSON 3 BASIC

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WORKING WITH IMPLEMENTATIONS AND !ARCHITECTURES

The Great chocolate chip muffin problem

Hi There I would like to buy a chocolate chip muffin

Baker gives me this

(Chocolate muffin with chips)



I was expecting this

(Regular muffin with chips)





Both types of muffin can be considered as “Chocolate Chip Muffin”. They are both implementation of a great original idea. (I Still think my choice is correct) 😊

In Computer Engineering we work with implementations of programming language (not language itself)

In machine learning (data engineering) we work with implementation of model/architecture not (SOTA) architecture itself.

Unless of course you are yourself trying to improve the language/framework or architecture or contributing to it in some form.

GITHUB REPO

<https://github.com/AIEDX>

JUPYTER NOTEBOOK

Jupyter (IPython) notebook files are simple JSON documents, containing text, source code, rich media output, and metadata. Each segment of the document is stored in a cell.[1]

Advantages

- Interleave Code and Comment cell.
- Great to showcase proof of concepts or demonstration of experimental setup.
- Can create complete book style lessons for education with theory and code in same notebook.
- Runs in a browser and it's easy to share notebooks.
- Great for instant and shallow debugging.
- Its not an IDE (Integrated Development Environment)

Disadvantages

- Its not an IDE (Integrated Development Environment)!

GOOGLE COLAB

Alternatives

- Paperspace
- Amazon SageMaker
- Kaggle



- Many More!!!!

INSTALLATION

DEPENDENCIES

PYTHON

Adding Path using existing script

```
win_add2path.py - C:\Python27\Tools\Scripts\win_add2path.py (2.7.17)
File Edit Format Run Options Window Help

"""Add Python to the search path on Windows

This is a simple script to add Python to the Windows search path
modifies the current user (HKCU) tree of the registry.

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"""

import sys
import site
import os
import _winreg

HKCU = _winreg.HKEY_CURRENT_USER
ENV = "Environment"
PATH = "PATH"
DEFAULT = u"%PATH%"

def modify():
    pythonpath = os.path.dirname(os.path.normpath(sys.executable))
    scripts = os.path.join(pythonpath, "Scripts")
    appdata = os.environ["APPDATA"]
    if hasattr(site, "USER_SITE"):
        userpath = site.USER_SITE.replace(appdata, "%APPDATA%")
        userscripts = os.path.join(userpath, "Scripts")
    else:
        userscripts = None

    with _winreg.CreateKey(HKCU, ENV) as key:
        try:
            envpath = _winreg.QueryValueEx(key, PATH)[0]
        except WindowsError:
            envpath = DEFAULT

    paths = [envpath]
    for path in (pythonpath, scripts, userscripts):
        if path and path not in envpath and os.path.isdir(path):
            paths.append(path)
```

REFERENCES

- [1] *Jupyter Notebook*. (n.d.). Retrieved from <https://nbformat.readthedocs.io/en/latest/>

