CHOCOLATE CHIP MUFFIN: PROGRAMMING BASICS FOR MACHINE LEARNING

LESSON 3 BASIC

ROOT

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 chip

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.**Error! Reference source not found.**

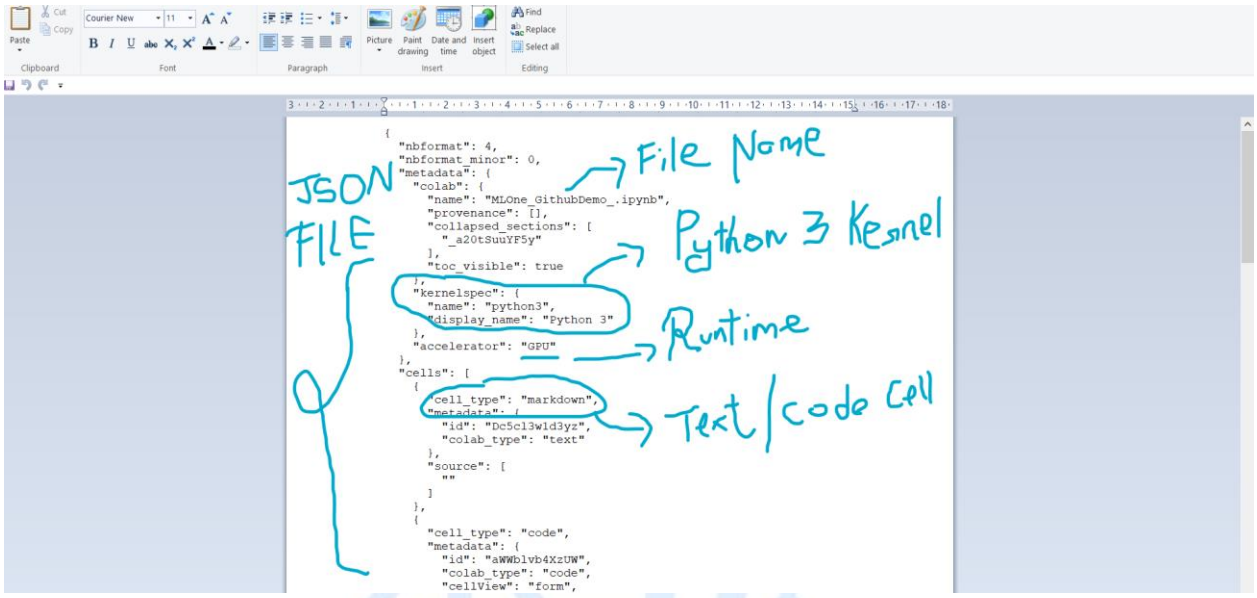
Advantages

- 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)!

Jupyter notebooks are basically small text files that can be opened with any editor or with WordPad/notepad



WORKING WITH HTML AND LATEX ON JUPYTER NOTEBOOK

You can easily work with Latex and Mathjax and write equations and mathematical expressions with ease.

GOOGLE COLAB

ALTERNATIVES

- Paperspace
- Amazon SageMaker
- Kaggle
- Many More!!!!!

RUNNING EXAMPLE- GOOGLE COLAB

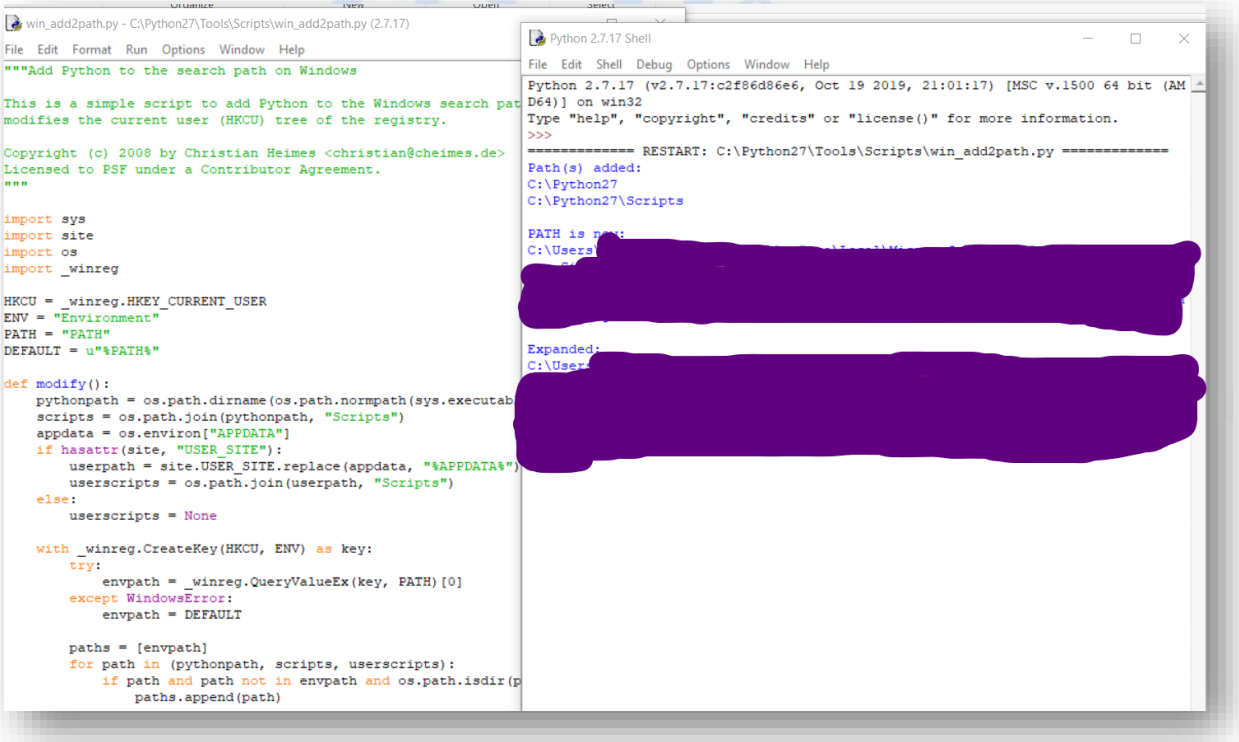
RUNNING EXAMPLE- JUPYTER NOTEBOOK ON YOUR LOCAL ENVIRONMENT

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 pat
modifies the current user (HKCU) tree of the registry.
Copyright (c) 2008 by Christian Heimes <christian@cheimes.de>
Licensed to PSF under a Contributor Agreement.
"""
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.executab
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(p
paths.append(path)
Python 2.7.17 Shell
File Edit Shell Debug Options Window Help
Python 2.7.17 (v2.7.17:c2f86d86e6, Oct 19 2019, 21:01:17) [MSC v.1500 64 bit (AM
D64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Python27\Tools\Scripts\win_add2path.py ==========
Path(s) added:
C:\Python27
C:\Python27\Scripts
PATH is now:
C:\Users
Expanded:
C:\User

OTHER LINKS

1. https://ujjwalkarn.me/2016/08/11/intuitive-explanation-convnets/

WORKS CITED

Google . (2020). *Object Detection at Tensorflow Hub*. Retrieved from Tensorflow Hub: https://www.tensorflow.org/hub/tutorials/object_detection#

Jupyter. (n.d.). *MathJax Latex*. Retrieved from https://jupyter-notebook.readthedocs.io/en/stable/examples/Notebook/Typesetting%20Equations.html

Jupyter Notebook. (n.d.). Retrieved from https://nbformat.readthedocs.io/en/latest/