

## Win10 virtual environment debug

For the issue like

### Error with im2col\_cython

Actions ▾

Despite numerous efforts, I am continuously getting this error.

```
run the following from the cs231n directory and try again:  
python setup.py build_ext --inplace  
You may also need to restart your iPython kernel
```

I have tried uninstalling and re-installing my VC++, followed the procedure in the error statement many times too, still no use. can anyone help me with it?! P.S. I am using Anaconda3 with Python3 in Windows (though I think that wouldn't make a difference)

### Trouble loading Cython for fast layers

Actions ▾

When I tried to run the fast layers, the forward works but the backward layer give error as follows:

```
Testing conv_forward_fast:  
Naive: 8.736015s  
Fast: 0.031200s  
Speedup: 279.998961x  
Difference: 5.240723401860743e-10  
  
-----  
NameError Traceback (most recent call last)  
<ipython-input-4-d0e7ac55f1f2> in <module>()  
    23 dx_naive, dw_naive, db_naive = conv_backward_naive(dout, cache_naive)  
    24 t1 = time()  
--> 25 dx_fast, dw_fast, db_fast = conv_backward_fast(dout, cache_fast)  
    26 t2 = time()  
    27  
  
c:\School_Offline\HW5\code\cs231n\fast_layers.py in conv_backward_strides(dout, cache)  
    102     dx_cols = w.reshape(F, -1).T.dot(dout_reshaped)  
    103     dx_cols.shape = (C, HH, WW, N, out_h, out_w)  
--> 104     dx = col2im_6d_cython(dx_cols, N, C, H, W, HH, WW, pad, stride)  
    105  
    106     return dx, dw, db  
  
NameError: name 'col2im_6d_cython' is not defined
```

I tried to shutdown it and type the instructed code in cs231n,

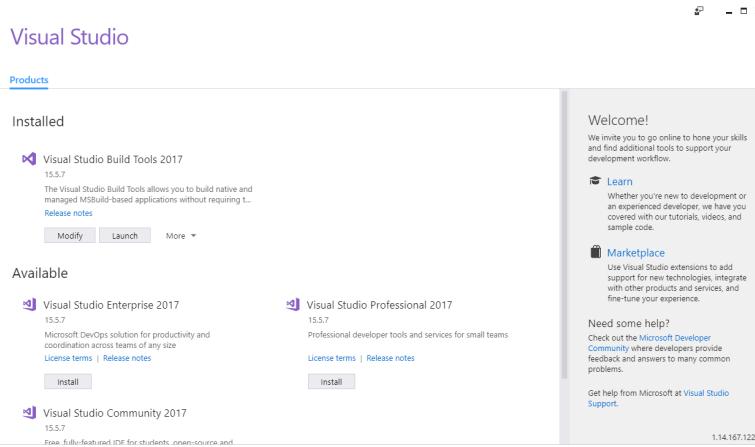
```
(.env) PS C:\School_Offline\HW5\code\cs231n> python setup.py build_ext --inplace  
Traceback (most recent call last):  
  File "setup.py", line 3, in <module>  
    from Cython.Build import cythonize  
ModuleNotFoundError: No module named 'Cython'  
(.env) PS C:\School_Offline\HW5\code\cs231n> pip install Cython  
Collecting Cython  
  Using cached Cython-0.27.3-cp36-cp36m-win_amd64.whl  
Installing collected packages: Cython  
Successfully installed Cython-0.27.3  
(.env) PS C:\School_Offline\HW5\code\cs231n> python setup.py build_ext --inplace  
Warning: Extension name 'im2col_cython' does not match fully qualified name 'cs231n.im2col_cython' of 'im2col_cython.pyx'  
Compiling im2col_cython.pyx because it depends on C:\School_Offline\HW5\.env\lib\site-packages\Cython\Includes\numpy\__init__.pxd.  
[1/1] Cythonizing im2col_cython.pyx  
running build_ext  
building 'im2col_cython' extension  
error: Unable to find vcvarsall.bat
```

It first shown Cython not found and I try to install Cython which result in a missing file. Does anyone have any idea how is this happening?

Please follow the following steps:

1. (Install assignment normally)
2. cmd: .env\Scripts\activate.bat (if not activated)
3. cmd: pip install cython
4. cmd: .env\Scripts\deactivate.bat

5. Install “Build Tools for Visual Studio 2017”: <https://www.visualstudio.com/downloads/#build-tools-for-visual-studio-2017>



6. Restart computer

7. Modify cs231n/setup.py from text editor to:

```
#from distutils.core import setup
#from distutils.extension import Extension
try:
    from setuptools import setup
    from setuptools import Extension
except ImportError:
    from distutils.core import setup
    from distutils.extension import Extension
from Cython.Build import cythonize
import numpy

extensions = [
    Extension('im2col_cython', ['im2col_cython.pyx'],
              include_dirs=[numpy.get_include()])
]

setup(
    ext_modules = cythonize(extensions),
)
```

8. Open cmd prompt, cd{hw dir}
9. cmd: .env\Scripts\activate.bat
10. cmd: cd cs231n
11. cmd: python setup.py build\_ext --inplace
  - should install correctly
12. cmd: cd ..
  - back to directory

For Linux, please change to python 2.7 and install the required packages and Cython-0.27.3.