

TensorFlow Installation Guide

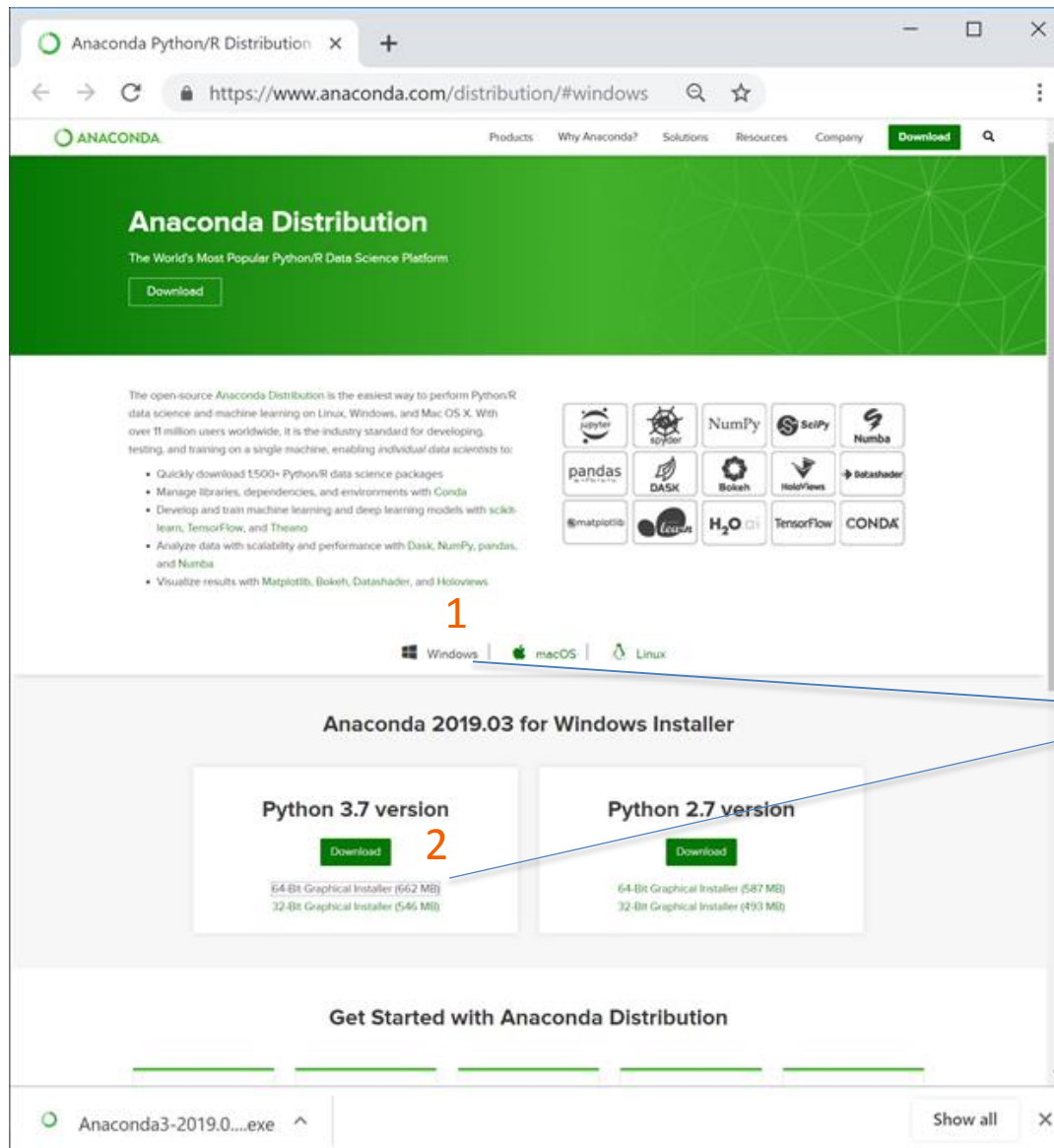
For Window 10

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2. Install:
 - a. Anaconda
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3. Verify TensorFlow Installation

1. Download Anaconda (Window 64-bit)

Click here: <https://www.anaconda.com/distribution/#windows>



Click:

- Windows icon
- 64 bit

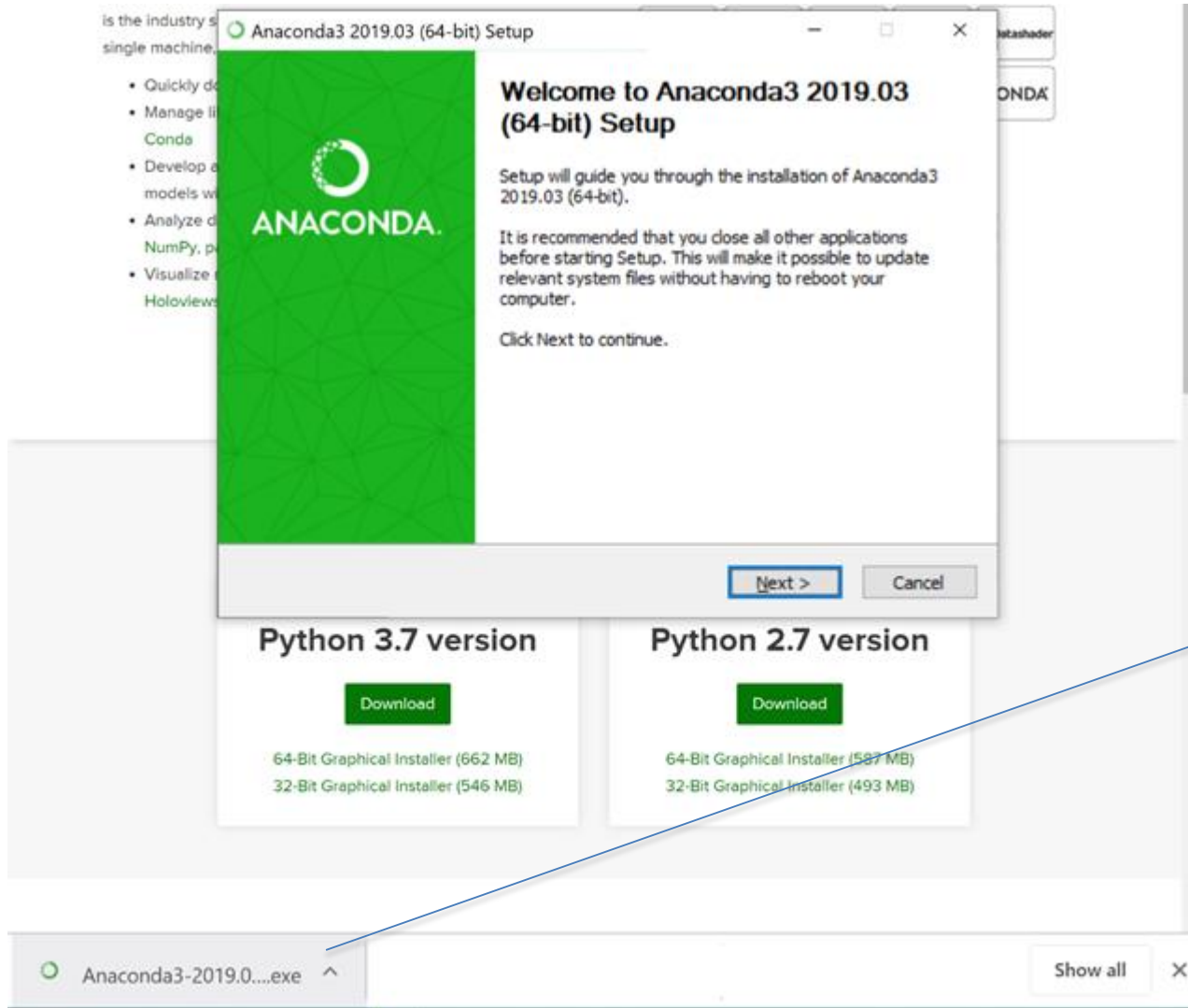
Hardware Recommendation:

- ✓ CPU: i5 (64bit) or above
- ✓ Memory: 4Gb or above
- ✓ Internet enabled
- ✓ Window admin right

Downloaded file: Anaconda3-2019.03-Windows-x86_64.exe

2a. Install Anaconda

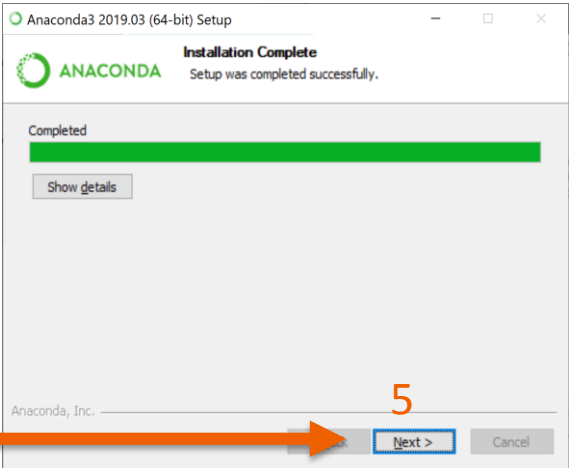
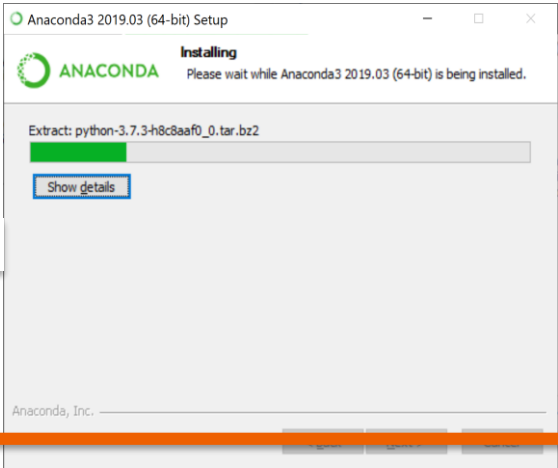
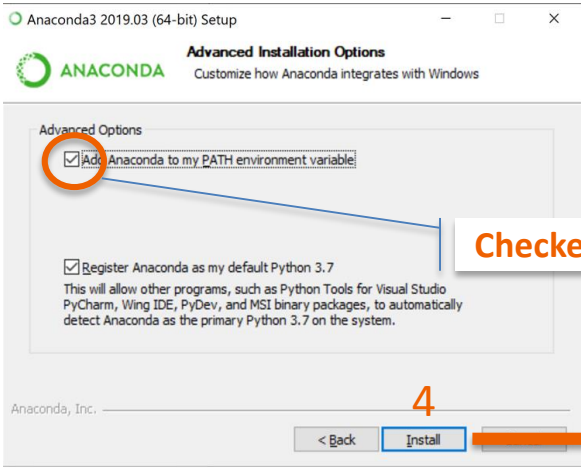
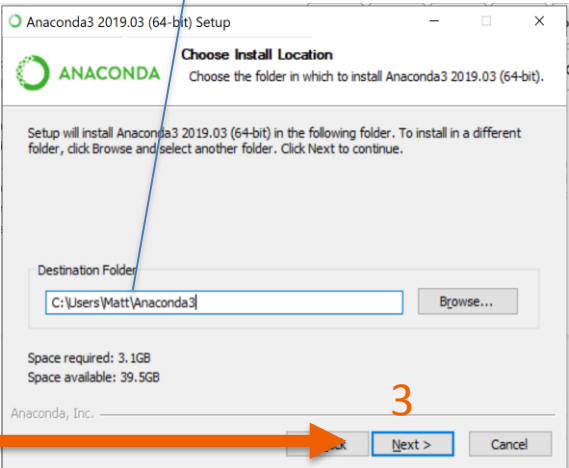
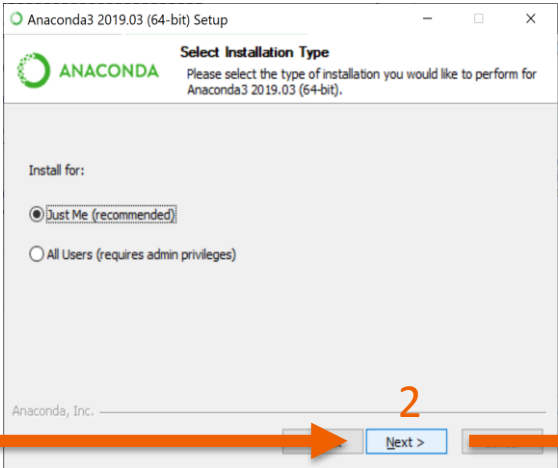
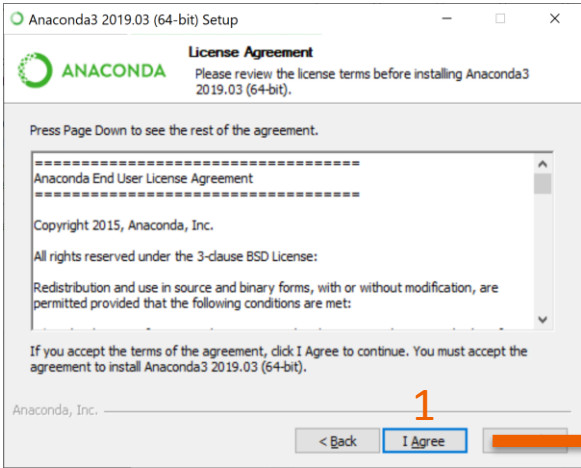
Double click: Anaconda3-2019.03-Windows-x86_64.exe



Double click the file and click "Next >" button.

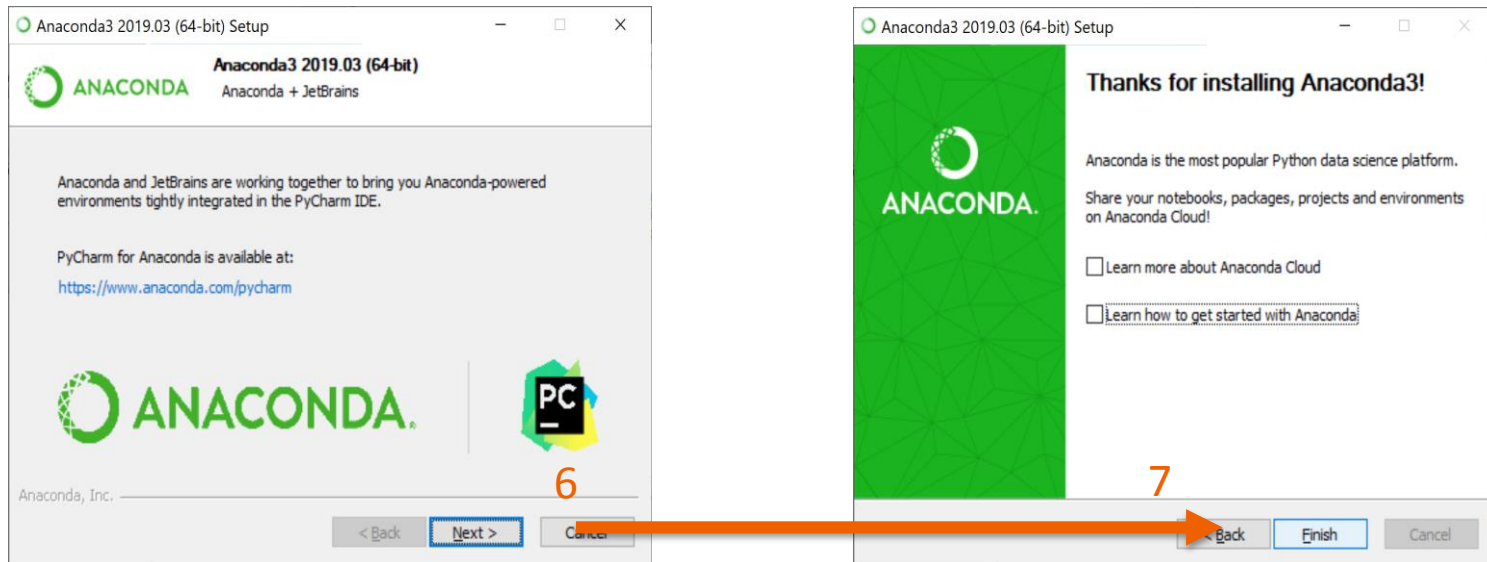
2a. Install Anaconda

Please remember or write down your destination path!



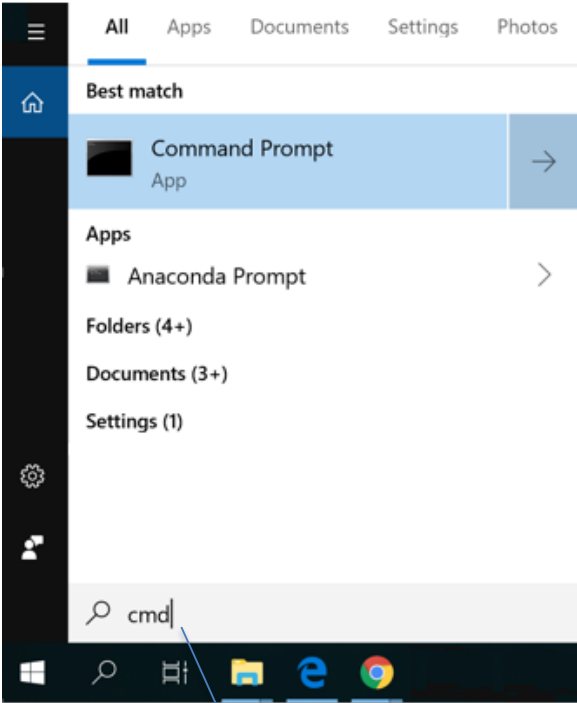
<< Click all the buttons by default! >>

2a. Install Anaconda



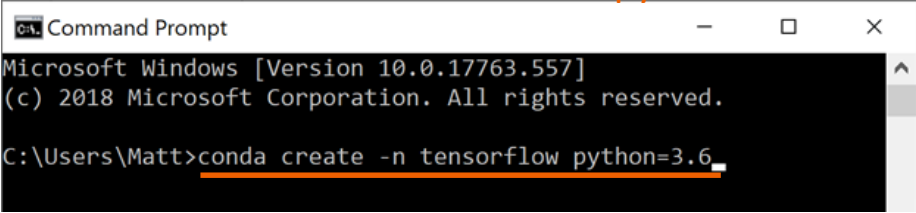
<< Click “Next >” & “Finish” button (Anaconda installation completed!) >>

2b. Install TensorFlow (Command Prompt)

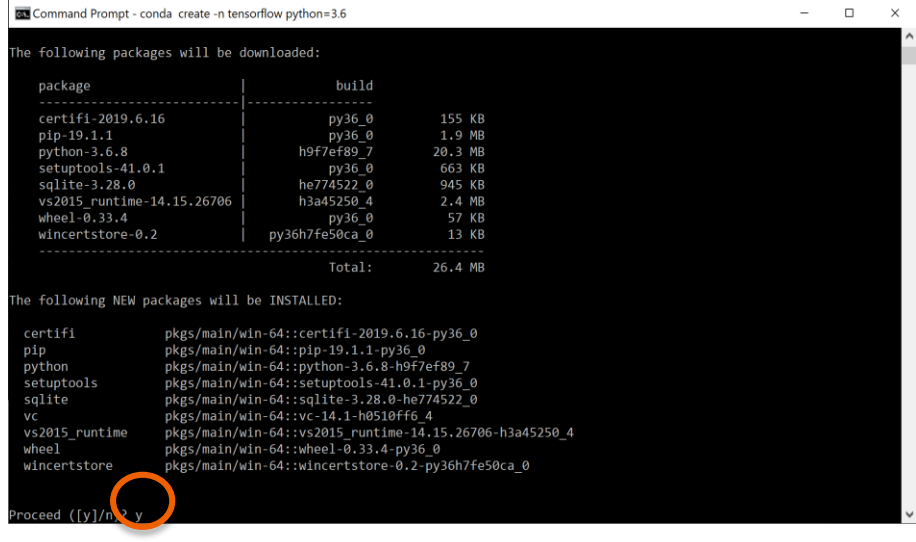


Enter "cmd" and press enter.
(Open Command Prompt)

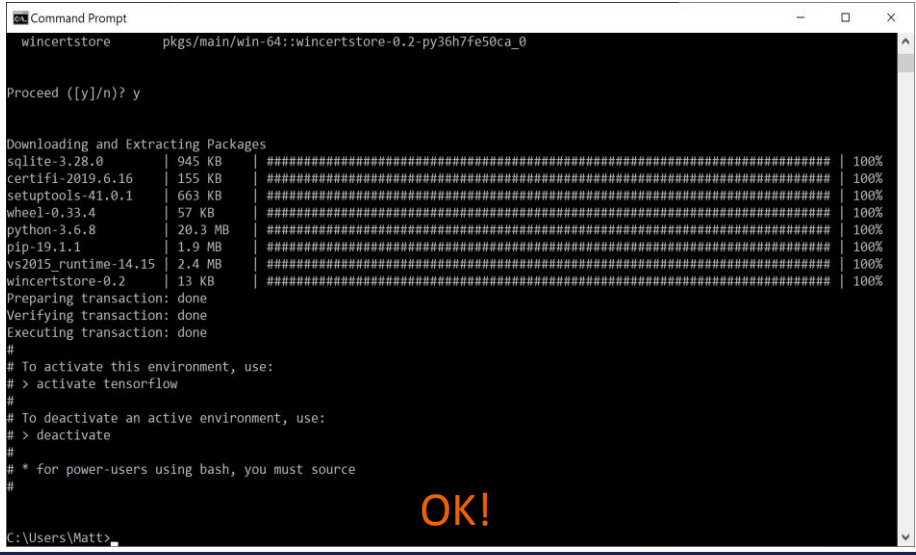
1 Enter: conda create -n tensorflow python=3.6



2 Enter: y



3



OK!

2b. Install TensorFlow (Activate)

1 Enter: activate tensorflow

```
Command Prompt
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use:
# > activate tensorflow
#
# To deactivate an active environment, use:
# > deactivate
#
# * for power-users using bash, you must source

C:\Users\Matt>activate tensorflow
(tensorflow) C:\Users\Matt>
```

2 Enter: conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py

```
Command Prompt
pip          pkgs/main/win-64::pip-19.1.1-py36_0
python       pkgs/main/win-64::python-3.6.8-h9f7ef89_7
setuptools   pkgs/main/win-64::setuptools-41.0.1-py36_0
sqlite       pkgs/main/win-64::sqlite-3.28.0-he774522_0
vc           pkgs/main/win-64::vc-14.1-h0510ff6_4
vs2015_runtime pkgs/main/win-64::vs2015_runtime-14.15.26706-h3a45250_4
wheel        pkgs/main/win-64::wheel-0.33.4-py36_0
wincertstore pkgs/main/win-64::wincertstore-0.2-py36h7fe50ca_0

Proceed ([y]/n)? y

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use:
# > activate tensorflow
#
# To deactivate an active environment, use:
# > deactivate
#
# * for power-users using bash, you must source
#

C:\Users\Matt>activate tensorflow
(tensorflow) C:\Users\Matt>conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py
```

3 Enter: y

```
Command Prompt - conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py
zeromq       pkgs/main/win-64::zeromq-4.3.1-h33f27b4_3
zlib         pkgs/main/win-64::zlib-1.2.11-h62dc097_3
zstd         pkgs/main/win-64::zstd-1.3.7-h508b16e_0

Proceed ([y]/n)? y
```

4

```
Command Prompt - conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py
jupyter_client-5.2.4      203 KB  ##### 100%
cffi-1.12.3              225 KB  ##### 100%
sphinxcontrib-qt         26 KB   ##### 100%
sphinxcontrib-serial     24 KB   ##### 100%
pillow-6.0.0             699 KB  ##### 100%
decorator-4.4.0          19 KB   ##### 100%
imageio-1.1.0            10 KB   ##### 100%
mistune-0.8.4            54 KB   ##### 100%
pickleshare-0.7.5       13 KB   ##### 100%
chardet-3.0.4            210 KB  ##### 100%
attrs-19.1.0             57 KB   ##### 100%
qtconsole-4.4.0          38 KB   ##### 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: / DEBUG menuinst_win32: _init_ (199): Menu: name: 'Anaconda${PY_VER} ${PLATFORM}', prefix: 'C:\Users\Matt\Anaconda3\envs\tensorflow', env_name: 'tensorflow', mode: 'user', used mode: 'user'
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\python.exe, args are ['C:\Users\Matt\Anaconda3\cwp.py', 'C:\Users\Matt\Anaconda3\envs\tensorflow', 'C:\Users\Matt\Anaconda3\envs\tensorflow\python.exe', 'C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\jupyter-notebook-script.py', "%USERPROFILE%\"]
DEBUG menuinst_win32: _init_ (199): Menu: name: 'Anaconda${PY_VER} ${PLATFORM}', prefix: 'C:\Users\Matt\Anaconda3\envs\tensorflow', env_name: 'tensorflow', mode: 'user', used mode: 'user'
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\python.exe, args are ['C:\Users\Matt\Anaconda3\cwp.py', 'C:\Users\Matt\Anaconda3\envs\tensorflow', 'C:\Users\Matt\Anaconda3\envs\tensorflow\python.exe', 'C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\spyder-script.py']
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\python.exe, args are ['C:\Users\Matt\Anaconda3\cwp.py', 'C:\Users\Matt\Anaconda3\envs\tensorflow', 'C:\Users\Matt\Anaconda3\envs\tensorflow\python.exe', 'C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\spyder-script.py', '--reset']
done
(tensorflow) C:\Users\Matt>
```

OK!

Go thru all the steps

2b. Install TensorFlow (CPU)

1 Enter: `pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/windows/cpu/tensorflow-1.12.0-cp36-cp36m-win_amd64.whl`

```
Command Prompt - conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py

Cffi-1.12.3 225 KB |#####| 100%
Sphinxcontrib-qtelp 26 KB |#####| 100%
Sphinxcontrib-serial 24 KB |#####| 100%
pillow-6.0.0 699 KB |#####| 100%
decorator-4.4.0 19 KB |#####| 100%
imagesize-1.1.0 10 KB |#####| 100%
mistune-0.8.4 54 KB |#####| 100%
pickleshare-0.7.5 13 KB |#####| 100%
chardet-3.0.4 210 KB |#####| 100%
attrs-19.1.0 57 KB |#####| 100%
qtconsole-4.5.0 38 KB |#####| 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: / DEBUG menuinst_win32: _init_ (199): Menu: name: 'Anaconda${PY_VER} ${PLATFORM}', prefix: 'C:\Users\Matt\Anaconda3\envs\tensorflow', env_name: 'tensorflow', mode: 'user', used mode: 'user'
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\python.exe, args are ['C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\jupyter-notebook-script.py', '"%USERPROFILE%"']
DEBUG menuinst_win32: _init_ (199): Menu: name: 'Anaconda${PY_VER} ${PLATFORM}', prefix: 'C:\Users\Matt\Anaconda3\envs\tensorflow', env_name: 'tensorflow', mode: 'user', used mode: 'user'
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\pythonw.exe, args are ['C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\spyder-script.py']
DEBUG menuinst_win32:create(323): Shortcut cmd is C:\Users\Matt\Anaconda3\python.exe, args are ['C:\Users\Matt\Anaconda3\envs\tensorflow\Scripts\spyder-script.py', '--reset']
done
(tensorflow) C:\Users\Matt>pip install --ignore-installed --upgrade https://storage.googleapis.com/tensorflow/windows/cpu/tensorflow-1.12.0-cp36-cp36m-win_amd64.whl
```

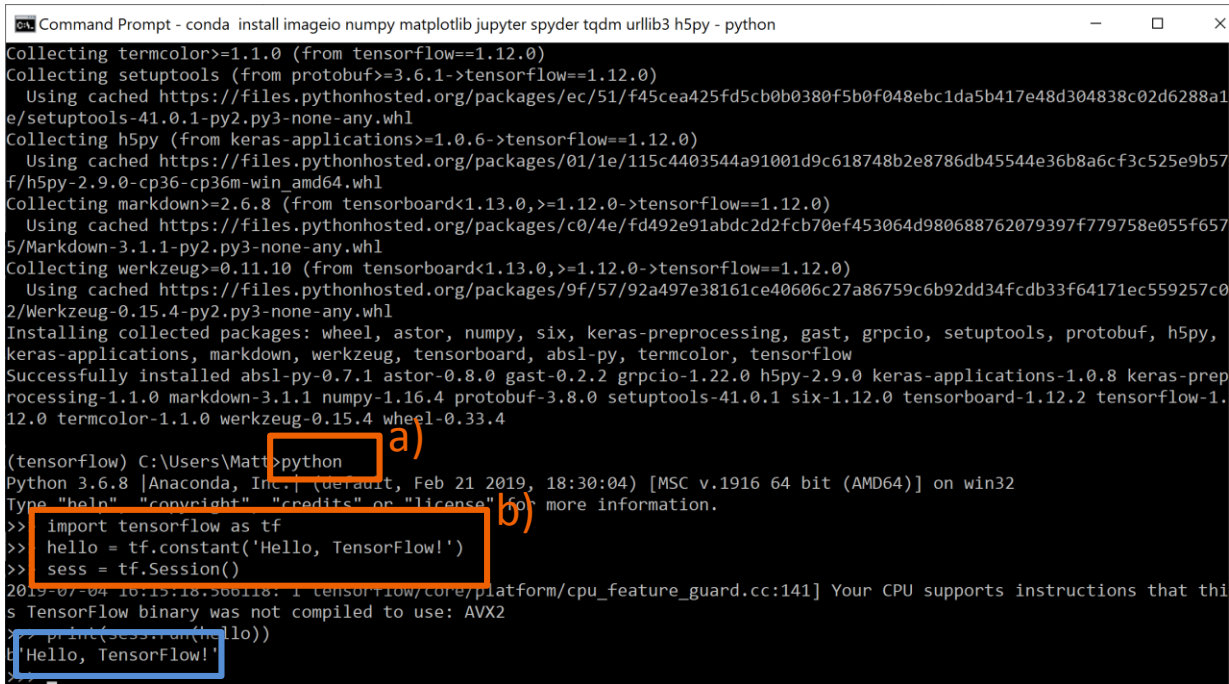
```
2 Command Prompt - conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py

Collecting keras-applications>1.0.6 (from tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/71/e3/19762fd6c2877ae9102edf6342d71b28fbfd9dea3d2f96a882ce099b03f/Keras_Applications-1.0.8-py3-none-any.whl
Collecting tensorboard<1.13.0,>=1.12.0 (from tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/07/53/8d32ce9471c18f8d99028b7cef2e5b39ea8765bd7ef250ca05b490880971/tensorboard-1.12.2-py3-none-any.whl
Collecting absl-py>=0.1.6 (from tensorflow==1.12.0)
Collecting numpy>=1.13.3 (from tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/20/ed/e036d31a9b2c750f270cbb1cfc1c0f94ac78ae504eea7e3267be4294a/numpy-1.16.4-cp36-cp36m-win_amd64.whl
Collecting termcolor>=1.1.0 (from tensorflow==1.12.0)
Collecting setuptools (from protobuf>=3.6.1->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/ec/51/f45cea425fd5cb0b380f5b0f048ebc1da5b417e48d304838c02d6288a1e/setuptools-41.0.1-py2.py3-none-any.whl
Collecting h5py (from keras-applications>1.0.6->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/01/1e/115c4403544a91001d9c618748b2e8786db45544e36b8a6cf3c525e9b57f/h5py-2.9.0-cp36-cp36m-win_amd64.whl
Collecting markdown>=2.6.8 (from tensorboard<1.13.0,>=1.12.0->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/c0/4e/fd492e91abd2d2fcb70ef453064d980688762079397f7797580e55f6575/Markdown-3.1.1-py2.py3-none-any.whl
Collecting werkzeug>=0.11.10 (from tensorboard<1.13.0,>=1.12.0->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/9f/57/92a497e38161ce40606c27a86759c6b92dd34fcd33f64171ec559257c02/Werkzeug-0.15.4-py2.py3-none-any.whl
Installing collected packages: wheel, astor, numpy, six, keras-preprocessing, gast, grpcio, setuptools, protobuf, h5py, keras-applications, markdown, werkzeug, tensorboard, absl-py, termcolor, tensorflow
Successfully installed absl-py-0.7.1 astor-0.8.0 gast-0.2.2 grpcio-1.22.0 h5py-2.9.0 keras-applications-1.0.8 keras-preprocessing-1.1.0 markdown-3.1.1 numpy-1.16.4 protobuf-3.8.0 setuptools-41.0.1 six-1.12.0 tensorboard-1.12.2 tensorflow-1.12.0 termcolor-1.1.0 werkzeug-0.15.4 wheel-0.33.4
(tensorflow) C:\Users\Matt>
```

OK!

Go thru all the steps

3. Verify TensorFlow Installation (Python Shell)



```
Command Prompt - conda install imageio numpy matplotlib jupyter spyder tqdm urllib3 h5py - python
Collecting termcolor>=1.1.0 (from tensorflow==1.12.0)
Collecting setuptools (from protobuf>=3.6.1->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/ec/51/f45cea425fd5cb0b0380f5b0f048ebc1da5b417e48d304838c02d6288a1e/setuptools-41.0.1-py2.py3-none-any.whl
Collecting h5py (from keras-applications>=1.0.6->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/01/1e/115c4403544a91001d9c618748b2e8786db45544e36b8a6cf3c525e9b57f/h5py-2.9.0-cp36-cp36m-win_amd64.whl
Collecting markdown>=2.6.8 (from tensorboard<1.13.0,>=1.12.0->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/c0/4e/fd492e91abdc2d2fcb70ef453064d980688762079397f779758e055f6575/Markdown-3.1.1-py2.py3-none-any.whl
Collecting werkzeug>=0.11.10 (from tensorboard<1.13.0,>=1.12.0->tensorflow==1.12.0)
  Using cached https://files.pythonhosted.org/packages/9f/57/92a497e38161ce40606c27a86759c6b92dd34fcd33f64171ec559257c02/Werkzeug-0.15.4-py2.py3-none-any.whl
Installing collected packages: wheel, astor, numpy, six, keras-preprocessing, gast, grpcio, setuptools, protobuf, h5py, keras-applications, markdown, werkzeug, tensorboard, absl-py, termcolor, tensorflow
Successfully installed absl-py-0.7.1 astor-0.8.0 gast-0.2.2 grpcio-1.22.0 h5py-2.9.0 keras-applications-1.0.8 keras-preprocessing-1.1.0 markdown-3.1.1 numpy-1.16.4 protobuf-3.8.0 setuptools-41.0.1 six-1.12.0 tensorboard-1.12.2 tensorflow-1.12.0 termcolor-1.1.0 werkzeug-0.15.4 wheel-0.33.4

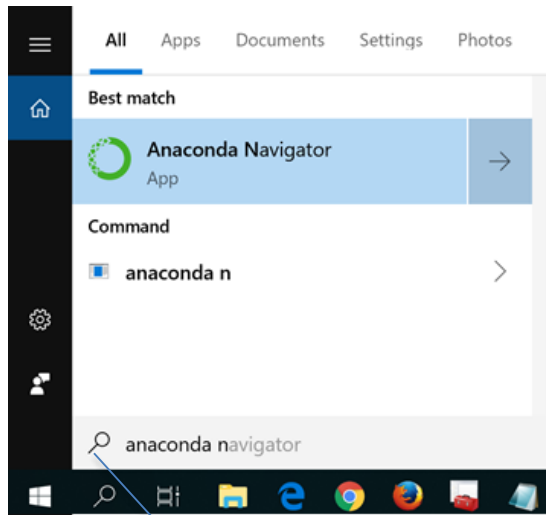
(tensorflow) C:\Users\Matt>python
Python 3.6.8 [Anaconda, Inc.] (default, Feb 21 2019, 18:30:04) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> import tensorflow as tf
>>> hello = tf.constant('Hello, TensorFlow!')
>>> sess = tf.Session()
2019-07-04 10:15:18.118018: I tensorflow/core/platform/cpu_feature_guard.cc:141] Your CPU supports instructions that this TensorFlow binary was not compiled to use: AVX2
>>> print(sess.run(hello))
b'Hello, TensorFlow!'
```

- a) Enter: **python**
- b) Enter this program into your Python shell:

```
import tensorflow as tf
hello = tf.constant('Hello, TensorFlow!')
sess = tf.Session()
print(sess.run(hello))
```

Good job! :)

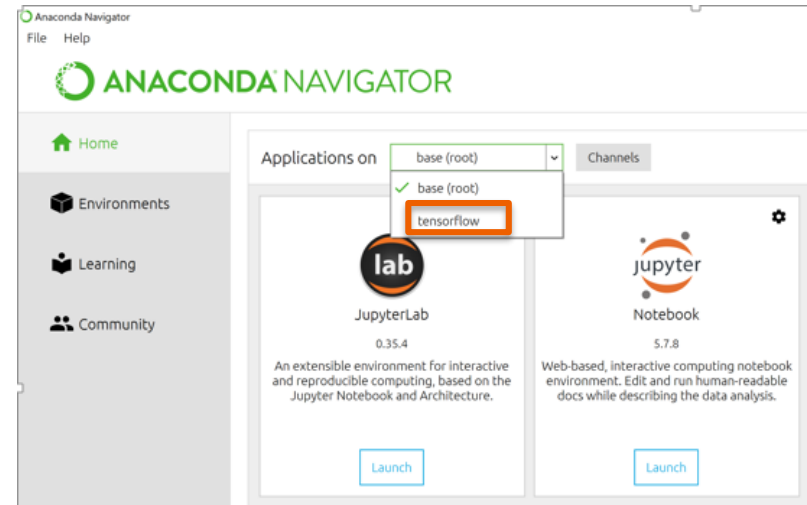
3. Verify TensorFlow Installation (JupyterNote book)



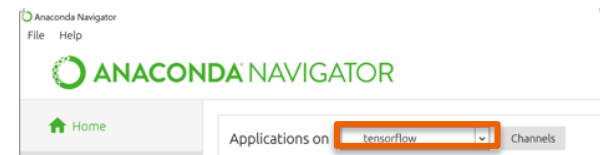
Enter "anaconda navigator"
(Open the app)



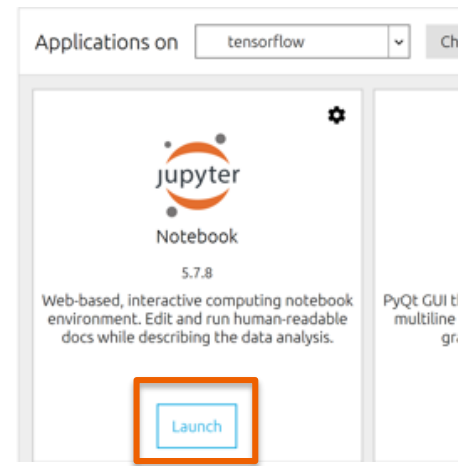
1 Click: tensorflow



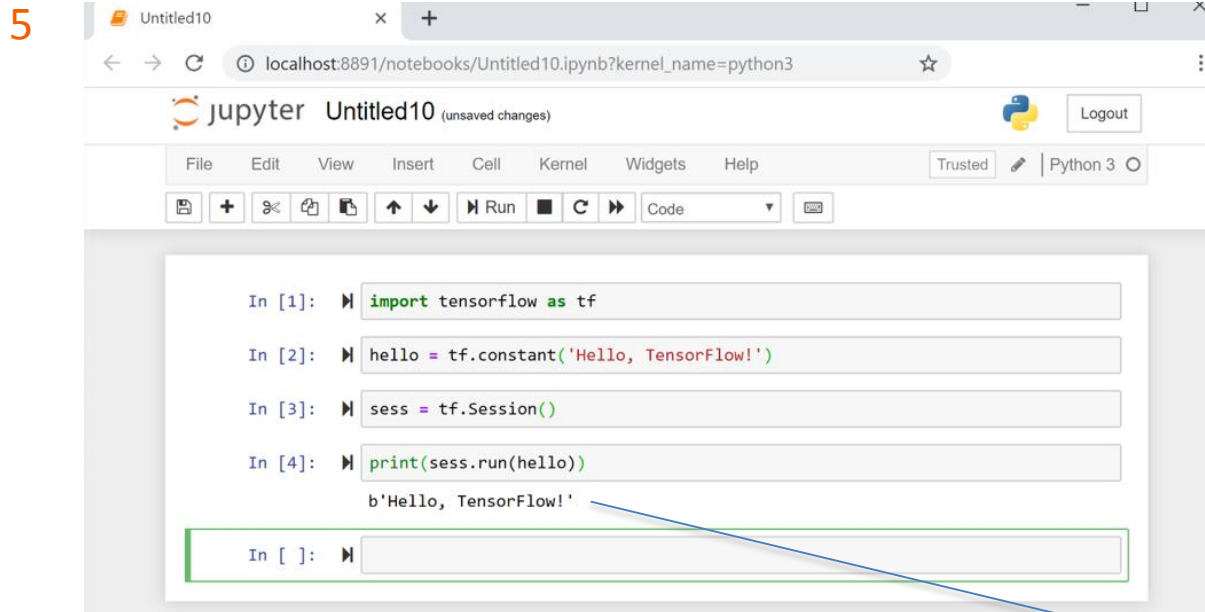
2 Ensure: tensorflow is enable!



3 Click: Launch



3. Verify TensorFlow Installation (JupyterNote book)



Good job! :)

Thank You