

Tensorflow

MACHINE LEARNING LIBRARY

۳۰ آذرماه ۱۳۹۶



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Tensorflow characteristics

- Open source library
- Dataflow programming
- Visualizing process
- Machine learning tools

<https://en.wikipedia.org/wiki/TensorFlow>

TensorFlow



TensorFlow

Developer(s)	Google Brain Team ^[1]
Initial release	November 9, 2015; 2 years ago
Stable release	1.4.0 ^[2] / November 2, 2017; 25 days ago
Repository	github.com/tensorflow/tensorflow 
Written in	Python, C++, CUDA
Platform	Linux, macOS, Windows, Android
Type	Machine learning library
License	Apache 2.0 open source license
Website	www.tensorflow.org 

Why tensorflow?

- Paralleling
 - Distribution (CPU- GPU)
 - Velocity
- API: Python_ C++
 - Fast compile
- Application
 - Identification image, voice, speech
 - Text mining, NLP
 - Time Series
 - Video detection

Why tensorflow?



Why tensorflow?



Deeplearning4j

Why tensorflow?



Caffe



Why tensorflow?



PYTORCH



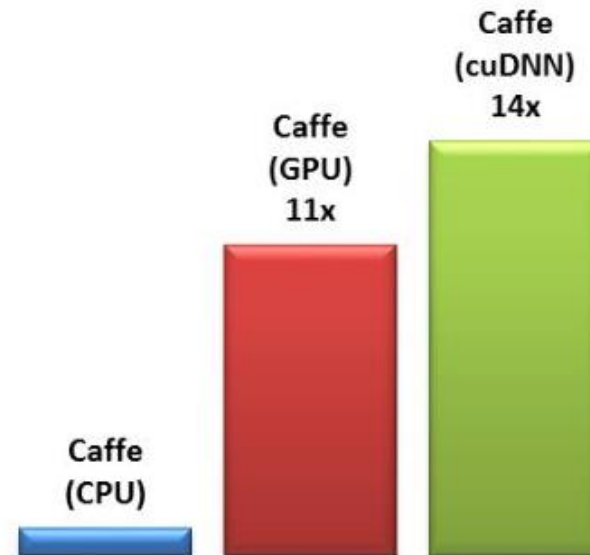
Why tensorflow?



Deeplearning4j



PYTORCH



Why tensorflow?

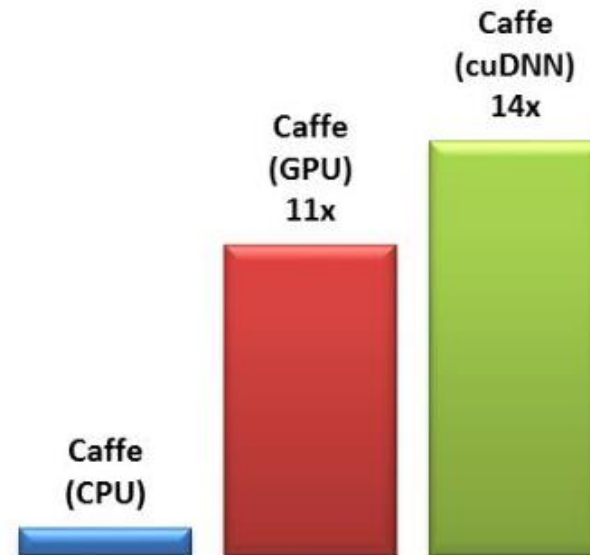


Deeplearning4j



dmlc
mxnet

PYTORCH



Why tensorflow?

dmlc
mxnet


Caffe2



Caffe


cuDNN

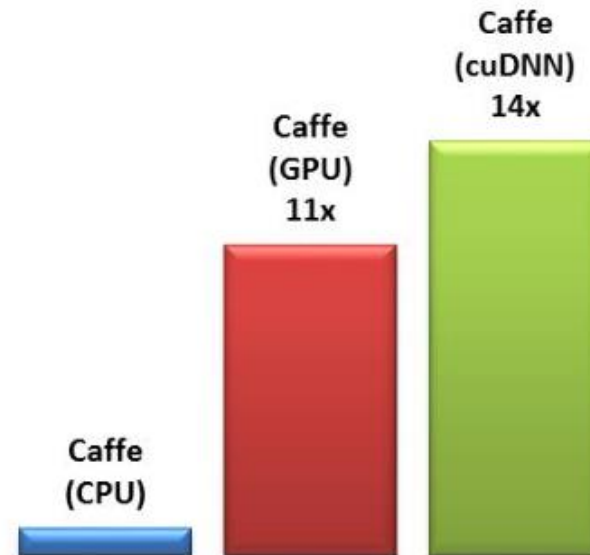


Deeplearning4j

 torch

PYTORCH

theano



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Why tensorflow?

dmlc
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Caffe2



Caffe


cuDNN


scikit
learn

Deeplearning4j

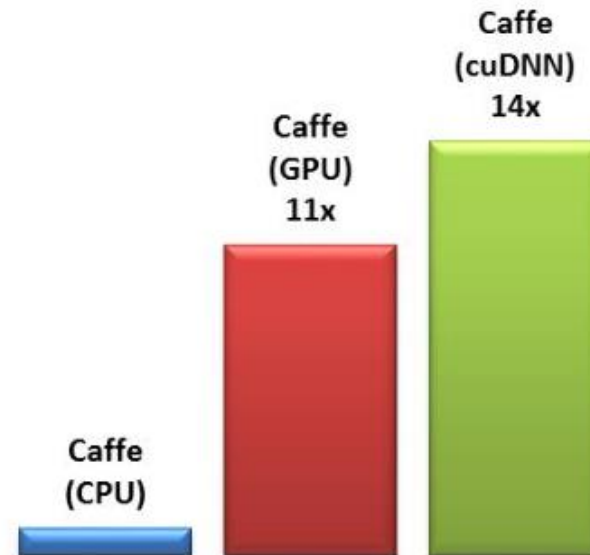
 torch

PYTORCH



theano

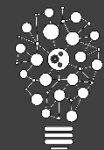

TensorFlow



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Install

- OS
 - Windows
 - Linux
 - Mac
- Python/Anaconda
- CPU/GPU



Install

Anaconda 5.0.1 For Windows Installer

Python 3.6 version *

↓ Download

[64-Bit Graphical Installer \(515 MB\)](#) ?

[32-Bit Graphical Installer \(420 MB\)](#)

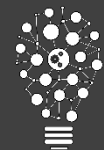
Python 2.7 version *

↓ Download

[64-Bit Graphical Installer \(500 MB\)](#) ?

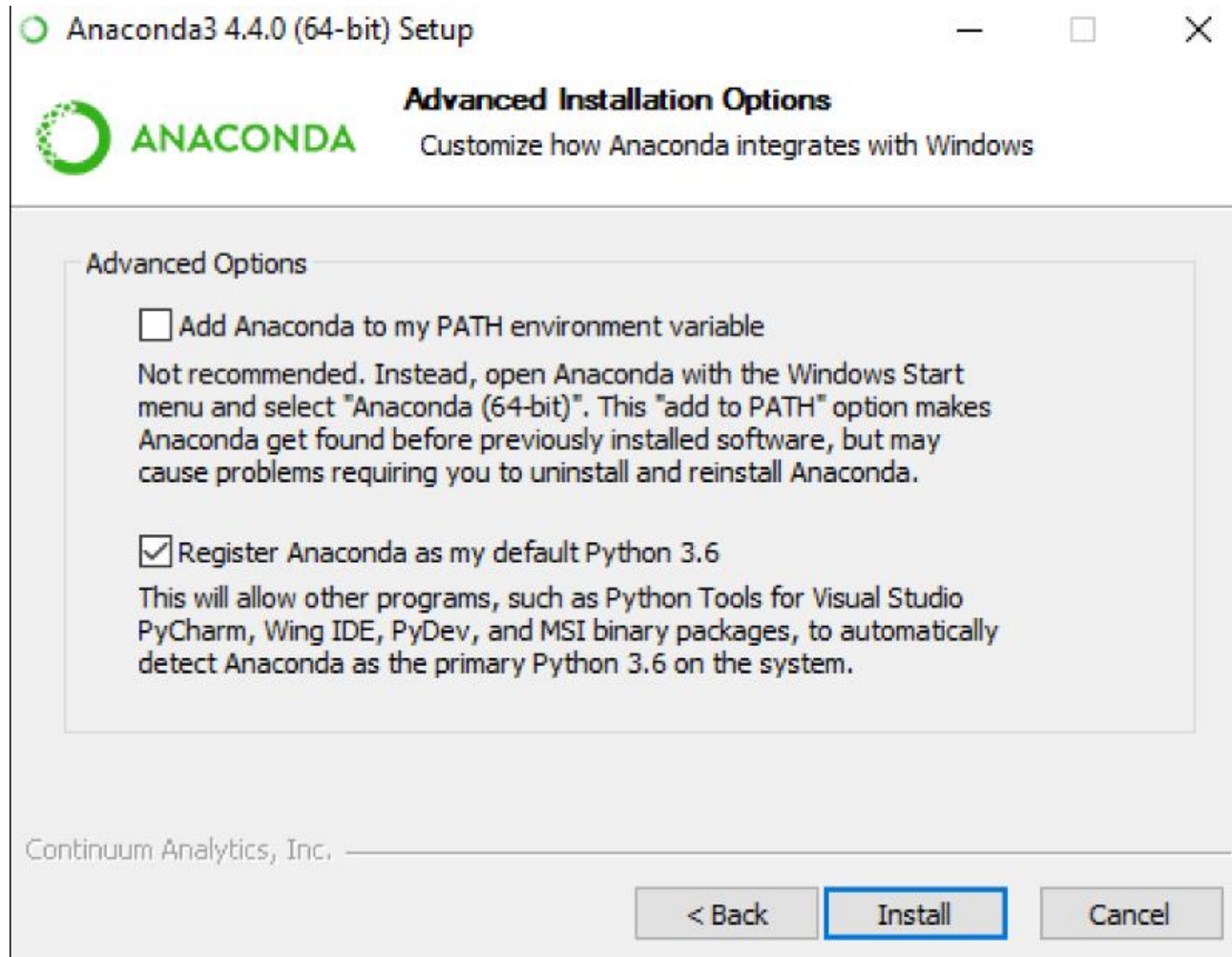
[32-Bit Graphical Installer \(403 MB\)](#)

<https://www.anaconda.com/download/#windows>

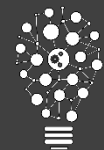


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Install Anaconda



docs.anaconda.com/anaconda/install/windows



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Anaconda 5.0.1 For Linux Installer

Python 3.6 version *

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Python 2.7 version *

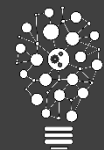
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[32-Bit Installer \(413 MB\)](#)

<https://www.anaconda.com/download/#linux>



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Basic Python library

- Numpy
- Pandas
- Matplotlib
- Scikit learn

