Building Caffe2

This guide builds from source. For alternatives, refer to https://caffe2.ai/docs/getting-started.html

Get latest source from GitHub.

```
git clone --recursive https://github.com/caffe2/caffe2.git
cd caffe2
```

Note that you might need to uninstall existing Eigen and pybind11 packages due to compile-time dependencies when building from source. For this reason, Caffe2 uses git submodules to reference external packages in the third_party folder. These are downloaded with the --recursive option.

MacOS X

```
brew install openblas glog gtest automake protobuf leveled lmdb
mkdir build && cd build
cmake .. -DBLAS=OpenBLAS -DUSE_OPENCV=off
make
```

Ubuntu

UBUNTU 14.04 LTS

```
sudo apt-get install libprotobuf-dev protobuf-compiler libatlas-base-dev libgoogle-
glog-dev libgtest-dev liblmdb-dev libleveldb-dev libsnappy-dev python-dev python-pip
libiomp-dev libopencv-dev libpthread-stubs0-dev cmake
sudo pip install numpy
wget http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1404/x86_64/cuda-
repo-ubuntu1404_8.0.44-1_amd64.deb
sudo dpkg -i cuda-repo-ubuntu1404_8.0.44-1_amd64.deb
sudo apt-get update
sudo apt-get install cuda
sudo apt-get install git

CUDNN_URL="http://developer.download.nvidia.com/compute/redist/cudnn/v5.1/cudnn-8.0-
linux-x64-v5.1.tgz" &&
curl -fsSL ${CUDNN_URL} -O &&
sudo tar -xzf cudnn-8.0-linux-x64-v5.1.tgz -C /usr/local &&
rm cudnn-8.0-linux-x64-v5.1.tgz &&
sudo ldconfig

mkdir build && cd build
cmake ..
make
```

UBUNTU 16.04 LTS

```
sudo apt-get install libprotobuf-dev protobuf-compiler libatlas-base-dev libgoogle-
glog-dev libgtest-dev liblmdb-dev libleveldb-dev libsnappy-dev python-dev python-pip
libiomp-dev libopencv-dev libpthread-stubs0-dev cmake
sudo pip install numpy
wget http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1604/x86_64/cuda-
```

```
repo-ubuntu1604_8.0.61-1_amd64.deb
sudo dpkg -i cuda-repo-ubuntu1604_8.0.61-1_amd64.deb
sudo apt-get update
sudo apt-get install cuda
sudo apt-get install git

CUDNN_URL="http://developer.download.nvidia.com/compute/redist/cudnn/v5.1/cudnn-8.0-
linux-x64-v5.1.tgz" &&
curl -fsSL ${CUDNN_URL} -O &&
sudo tar -xzf cudnn-8.0-linux-x64-v5.1.tgz -C /usr/local &&
rm cudnn-8.0-linux-x64-v5.1.tgz &&
sudo ldconfig

mkdir build && cd build
cmake ..
make
```

Python support

To use Caffe2 in Python, you need two libraries, future and six.

```
pip install future six
```

To run the tutorials, download additional source from GitHub.

```
git clone --recursive https://github.com/caffe2/tutorials.git caffe2_tutorials
cd caffe2_tutorials
```

You'll also need jupyter (formerly ipython) notebooks and matplotlib, which can be installed on MacOS X with

```
brew install matplotlib --with-python3
pip install jupyter
```