Caffe & Barrista

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Installation – practical tips

- Download from **http://caffe.berkeleyvision.org.**
- Install dependencies.
- Caffe uses the **Cmake build-system** with out-of-source builds => create a `build` folder, move there and
- **store compilation parameters in a shell-script** – the next time you can just copy and reuse it!
- Standard content:
  ```
  #!/bin/bash
  cmake \
    -DUSE_CUDNN=True \
    -DCMAKE_BUILD_TYPE=Release \
    ..
  ```
- Compiling for a specific GPU architecture is a huge time-saver! Do this by specifying, e.g., `-DCUDA_ARCH_NAME=Kepler`

Using the provided VirtualBox image

- (if necessary, enable the virtualization extensions in your BIOS, then select x64 Linux (Ubuntu) as VM type)
- (enable port-forwarding in Settings → Network → Adapter 1 → Advanced → Port Forwarding by adding ports 80 and 8888 (empty IPs) for host & VM)
- Start-up the virtual machine,
- Log in as **user `barrista`** with **password `barrista`**,
- Run `**./run_notebook.sh**` in your home-folder,
- Point your browser to **http://localhost:8888**,
- If you want to push the process to the background in the terminal, use Ctrl-z (e.g., to modify files in the VM in parallel), `tmux` (is installed) or similar.

The barrista software package is located in the folder `barrista` in the home directory. The notebooks are in the folder `notebooks`. Any change of barrista code will be reflected after a notebook restart.

Independent of your machine's configuration, the build provided is a CPU-only build to be fully portable. **A caffe binary built with GPU support always requires an installed GPU, even if run on CPU!**