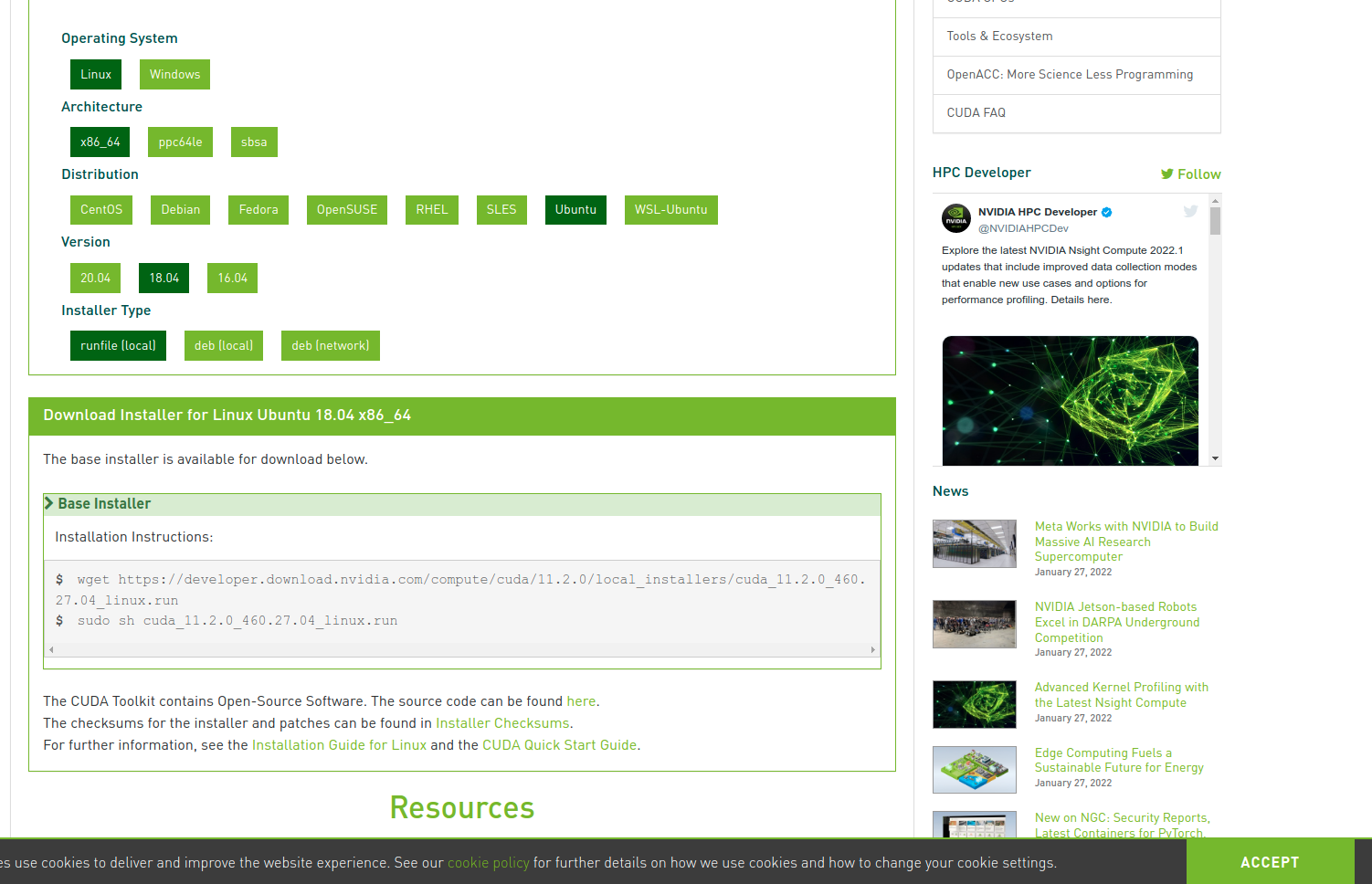
CUDA Installation Guide for Linux:

First you need to install the Nvidia Driver from Terminal:

* **sudo apt-get install nvidia-driver-450**

Then Download the the CUDA run file from Nvidia Website:

<https://developer.nvidia.com/cuda-11.2.0-download-archive?target_os=Linux&target_arch=x86_64&target_distro=Ubuntu&target_version=1804&target_type=runfilelocal>



* sudo sh cuda\_11.2.0\_460.27.04\_linux.run

Then you need to install the Torch version compatible with CUDA:

* pip install torch==1.9.0+cu111 torchvision==0.10.0+cu111 torchaudio==0.9.0 -f <https://download.pytorch.org/whl/torch_stable.html>

Torch for C++

* Installing CUDNN tar file (instructions on NVIDIA)
* Cudnn-linux-x86\_64-8.9.2.26\_cuda11-archive.tar.xz

CMAKE:

set(CMAKE\_PREFIX\_PATH /home/bluesky/Downloads/libtorch-cxx11-abi-shared-with-deps-1.8.0+cu112/libtorch)

find\_package(Torch REQUIRED)

set(CMAKE\_CXX\_FLAGS "${CMAKE\_CXX\_FLAGS} ${TORCH\_CXX\_FLAGS}")

Executable

add\_executable(uav\_torch\_ src/af\_torch.cpp)

target\_link\_libraries(uav\_torch\_ ${catkin\_LIBRARIES})

target\_link\_libraries(uav\_torch\_ ${TORCH\_LIBRARIES})

set\_property(TARGET uav\_torch\_ PROPERTY CXX\_STANDARD 14)

Copying libtorch into /opt/ros/noetic/share