

## 1.創建虛擬環境

至 [Miniforge3-4.8.3-4](#) 並下載 Miniforge-pypy3-4.8.3-4-Linux-aarch64.sh

#進入下載資料夾  
cd Downloads/

```
auo2102062@auo2102062-desktop:~$ cd Downloads/
```

#安裝 Miniforge  
sh Miniforge-pypy3-4.8.3-4-Linux-aarch64.sh

```
auo2102062@auo2102062-desktop:~/Downloads$ sh Miniforge-pypy3-4.8.3-4-Linux-aarch64.sh
```

#設定環境變數  
export PATH="/home/auo2102062/miniforge-pypy3/bin:\$PATH"

```
auo2102062@auo2102062-desktop:~/Downloads$ export PATH="/home/auo2102062/miniforge-pypy3/bin:$PATH"
```

#初始化虛擬環境  
source activate

```
auo2102062@auo2102062-desktop:~/Downloads$ source activate
```

#使用 conda 指令建立一個名為 Alphapose,python 版本為 3.6 的虛擬環境  
conda create -n alphapose python=3.6

```
(base) auo2102062@auo2102062-desktop:~/Downloads$ conda create -n Alphapose python=3.6
```

#啟動並進入先前創立的虛擬環境  
conda activate alphapose

```
(base) auo2102062@auo2102062-desktop:~/Downloads$ conda activate alphapose
```

#設定環境變數  
export PATH="/home/auo2102062/miniforge-pypy3/envs/alphapose/lib:\$PATH"

```
(alphapose) auo2102062@auo2102062-desktop:~$ export PATH="/home/auo2102062/miniforge-pypy3/envs/alphapose/lib:$PATH"
```

## 2.安裝 Pytorch for Jetson v1.1.0 version & Torchvision v0.3.0

進入 [Pytorch for Jetson](#) 找到 Pytorch v1.1.0 > Python3.6  
下載 torch-1.1.0-cp36-cp36m-linux\_aarch64.whl

#下載安裝 Torch 需求套件  
sudo apt-get install python3-pip libopenblas-base libopenmpi-dev

```
(alphapose) auo2102062@auo2102062-desktop:~$ sudo apt-get install python3-pip libopenblas-base libopenmpi-dev
```

#安裝 Cython

pip3 install Cython

```
(alphapose) auo2102062@auo2102062-desktop:~$ pip3 install Cython
```

#進入下載資料夾並安裝 Numpy 1.19.4 及 Torch 1.1.0

cd Downloads/

pip3 install numpy==1.19.4 torch-1.1.0-cp36-cp36m-linux\_aarch64.whl

```
(alphapose) auo2102062@auo2102062-desktop:~$ cd Downloads/
```

```
(alphapose) auo2102062@auo2102062-desktop:~/Downloads$ pip3 install numpy==1.19.4 torch-1.1.0-cp36-cp36m-linux_aarch64.whl
```

#下載安裝 Torchvision 需求套件

cd pytorch/

sudo pip3 install -r requirements.txt

sudo apt-get install libjpeg-dev zlib1g-dev libpython3-dev libavcodec-dev libavformat-dev  
libswscale-dev

```
(alphapose) auo2102062@auo2102062-desktop:~$ cd pytorch/
```

```
(alphapose) auo2102062@auo2102062-desktop:~/pytorch$ sudo pip3 install -r requirements.txt
```

```
(alphapose) auo2102062@auo2102062-desktop:~/Downloads$ sudo apt-get install libjpeg-dev zlib1g-dev libpython3-dev libavcodec-dev  
libavformat-dev libswscale-dev
```

#下載 Torchvision v0.3.0

git clone --branch v0.3.0 https://github.com/pytorch/vision torchvision

```
(alphapose) auo2102062@auo2102062-desktop:~/Downloads$ git clone --branch v0.3.0 https://github.com/pytorch/vision torchvision
```

#進入 torchvision 資料夾並設定環境變數

cd torchvision/

export BUILD\_VERSION=0.3.0

```
(alphapose) auo2102062@auo2102062-desktop:~$ cd torchvision/
```

```
(alphapose) auo2102062@auo2102062-desktop:~/torchvision$ export BUILD_VERSION=0.3.0
```

#安裝 torchvision

python3 setup.py install --user

```
(alphapose) auo2102062@auo2102062-desktop:~/torchvision$ python3 setup.py install --user
```

### 3. 下載 Alphapose 並 Build 起來

#下載 Alphapose

git clone https://github.com/MVIG-SJTU/AlphaPose.git

```
(alphapose) auo2102062@auo2102062-desktop:~$ git clone https://github.com/MVIG-SJTU/AlphaPose.git

#進入 Alphapose 資料夾並安裝 Alphapose 所需套件
cd AlphaPose/

pip3 install matplotlib

sudo apt-get install gfortran

(alphapose) auo2102062@auo2102062-desktop:~$ cd AlphaPose/
(alphapose) auo2102062@auo2102062-desktop:~/AlphaPose$ pip3 install matplotlib

(alphapose) auo2102062@auo2102062-desktop:~/AlphaPose$ sudo apt-get install gfortran

#Build Alphapose
python3 setup.py build develop --user

(alphapose) auo2102062@auo2102062-desktop:~/AlphaPose$ python3 setup.py build develop --user

#下載 Yolov3-spp.weight 並放置到 detector/yolo/data 資料夾底下  

(data 為自行創建的資料夾)

#下載 FastPose_model 放置到 pretrained_model 資料夾底下

#開啟 Alphapose 及 Webcam 進行偵測
python3 scripts/demo_inference.py --cfg configs/coco/resnet/256x192_res50_lr1e-3_1x.yaml --checkpoint pretrained_models/fast_res50_256x192.pth --outdir examples/res --vis --webcam 0

(alphapose) auo2102062@auo2102062-desktop:~/AlphaPose$ python3 scripts/demo_inference.py --cfg configs/coco/resnet/256x192_res50_lr1e-3_1x.yaml --checkpoint pretrained_models/fast_res50_256x192.pth --outdir examples/res --vis --webcam 0
```

Note: webcam 0 若出現 **AssertionError: Cannot capture source** 可改用 **webcam 1** 試看看

#此圖即為 Demo 結果

