



CiRA CORE AutoRun

FOR UBUNTU 16.04 (LTS) / 18.04 (LTS) / JETSON

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Version : 001 Language : English

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Version Ubuntu	: 16.04 and 18.04
Version ROS	: ROS 16.04 (Kinetic) and ROS 18.04 (Melodic)
Version CiRA CORE	: Ubuntu 16.04 LTS and 18.04 LTS
Version Jetson	: Jetpack 4.4

CiRA CORE AutoRun on Ubuntu 16.04 (Kinetics) and Ubuntu 18.04 (Melodic)

1. Download file “CiRACORE_AutoRun.zip”

<https://tinyurl.com/ciracore-autorun>

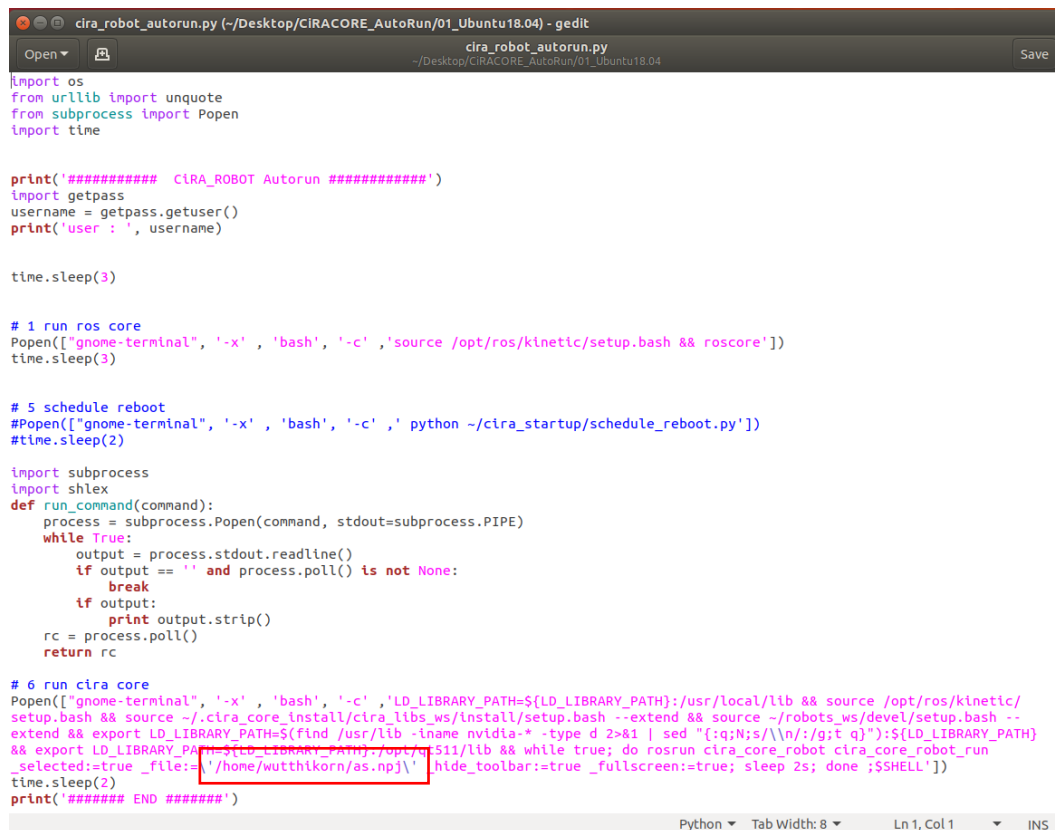
2. Extract file “CiRACORE_AutoRun.zip” to home or desktop

In this zip file have 3 folders. Select your OS that you want to do AutoRun.

3. After selecting correct OS folder, It has 3 files.

- cira_robot_autorun.py
- schedule_reboot.py
- Readme.rd

Setting in Files “cira_robot_autorun.py”



```

import os
from urllib import unquote
from subprocess import Popen
import time

print('##### CiRA_ROBOT Autorun #####')
import getpass
username = getpass.getuser()
print('user : ', username)

time.sleep(3)

# 1 run ros core
Popen(['gnome-terminal', '-x', 'bash', '-c', 'source /opt/ros/kinetic/setup.bash && roscore'])
time.sleep(3)

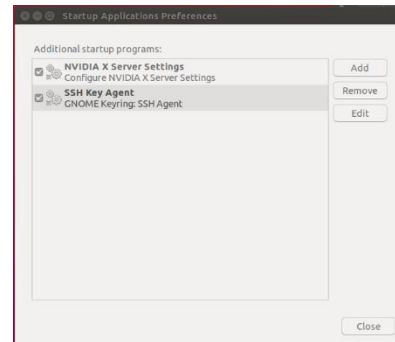
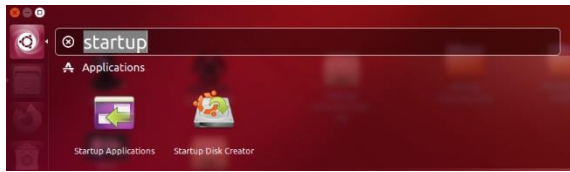
# 5 schedule reboot
#Popen(['gnome-terminal', '-x', 'bash', '-c', 'python ~/cira_startup/schedule_reboot.py'])
#time.sleep(2)

import subprocess
import shlex
def run_command(command):
    process = subprocess.Popen(command, stdout=subprocess.PIPE)
    while True:
        output = process.stdout.readline()
        if output == '' and process.poll() is not None:
            break
        if output:
            print output.strip()
    rc = process.poll()
    return rc

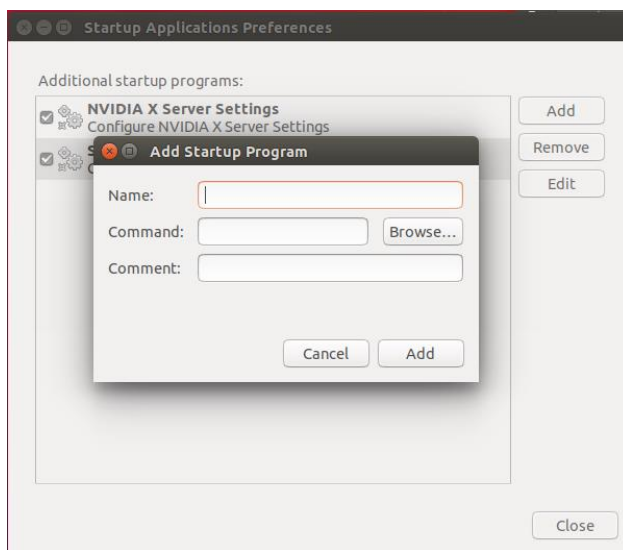
# 6 run cira core
Popen(['gnome-terminal', '-x', 'bash', '-c', 'LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/usr/local/lib && source /opt/ros/kinetic/
setup.bash && source ~/.cira_core_install/cira_libs_ws/install/setup.bash --extend && source ~/robots_ws/devel/setup.bash --
extend && export LD_LIBRARY_PATH=$(find /usr/lib -iname nvidia-* -type d 2>&1 | sed "[:q;N;s/\\n/:/g;t q]");${LD_LIBRARY_PATH}
&& export LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/opt/ros/kinetic/lib && while true; do roslaunch cira_core_robot cira_core_robot_run
_selected:=true _file:=/home/wutthikorn/as.npj/_hide_toolbar:=true _fullscreen:=true; sleep 2s; done; $SHELL'])
time.sleep(2)
print('##### END #####')
  
```

*Change directory to your .npj Files

4. Go to Search for files or Ctrl+F >> Startup Applications



5. Select “Add”

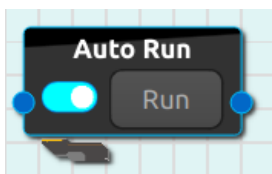


- Name : create a startup name
- Command : path to run
cira_robot_autorun.py
- Comment : description of name

```
gnome-terminal -e 'python '/home/.../cira_autorun.py''
```

* Copy text in the box and paste to command and Change to your directory of cira_robot_autorun.py file

6. In CiRA CORE use Auto Run Button to Auto Run



7. Restart PC/Laptop

CiRA CORE AutoRun on Jetson (Jetpack 4.4)

1. Download file “CiRACORE_AutoRun.zip”

<https://tinyurl.com/ciracore-autorun>

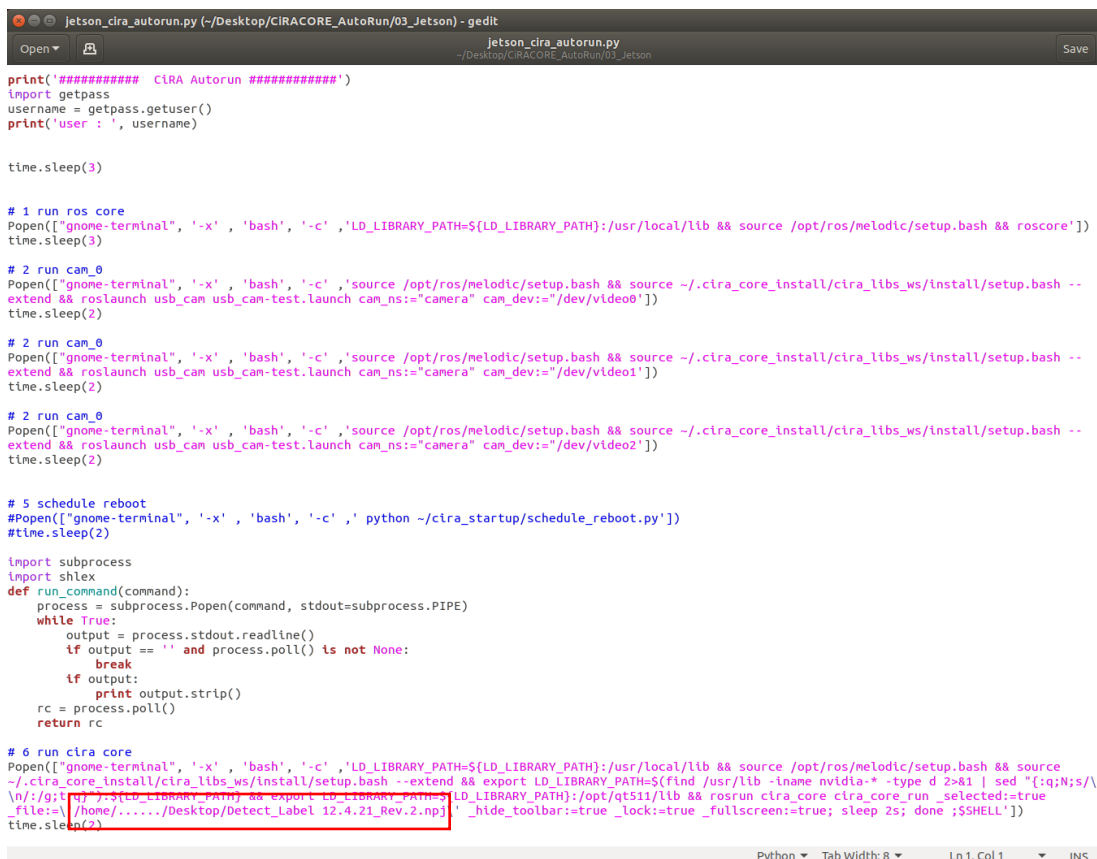
2. Extract file “CiRACORE_AutoRun.zip” to home or desktop

In this zip file have 3 folders. Select your OS that you want to do AutoRun.

3. After select correct OS folder it have 3 files.

- jetson_cira_autorun.py
- schedule_reboot.py
- Readme.rd

Setting in Files jetson_cira_autorun.py



```

jetson_cira_autorun.py (-/Desktop/CiRACORE_AutoRun/03_Jetson) - gedit
jetson_cira_autorun.py
~/Desktop/CiRACORE_AutoRun/03_Jetson

print('##### CiRA Autorun #####')
import getpass
username = getpass.getuser()
print('user : ', username)

time.sleep(3)

# 1 run ros core
Popen(['gnome-terminal', '-x', 'bash', '-c', 'LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/usr/local/lib && source /opt/ros/melodic/setup.bash && roscore'])
time.sleep(3)

# 2 run cam_0
Popen(['gnome-terminal', '-x', 'bash', '-c', 'source /opt/ros/melodic/setup.bash && source ~/.cira_core_install/cira_libs_ws/install/setup.bash --
extend && roslaunch usb_cam usb_cam-test.launch cam_ns="camera" cam_dev="/dev/video0'])
time.sleep(2)

# 2 run cam_0
Popen(['gnome-terminal', '-x', 'bash', '-c', 'source /opt/ros/melodic/setup.bash && source ~/.cira_core_install/cira_libs_ws/install/setup.bash --
extend && roslaunch usb_cam usb_cam-test.launch cam_ns="camera" cam_dev="/dev/video1'])
time.sleep(2)

# 2 run cam_0
Popen(['gnome-terminal', '-x', 'bash', '-c', 'source /opt/ros/melodic/setup.bash && source ~/.cira_core_install/cira_libs_ws/install/setup.bash --
extend && roslaunch usb_cam usb_cam-test.launch cam_ns="camera" cam_dev="/dev/video2'])
time.sleep(2)

# 5 schedule reboot
#Popen(['gnome-terminal', '-x', 'bash', '-c', 'python ~/cira_startup/schedule_reboot.py'])
#time.sleep(2)

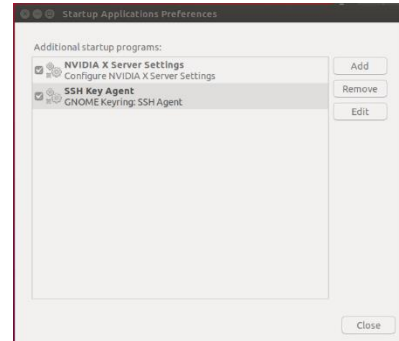
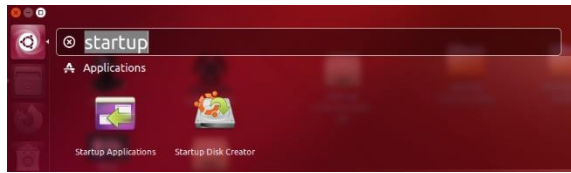
import subprocess
import shlex
def run_command(command):
    process = subprocess.Popen(command, stdout=subprocess.PIPE)
    while True:
        output = process.stdout.readline()
        if output == '' and process.poll() is not None:
            break
        if output:
            print output.strip()
    rc = process.poll()
    return rc

# 6 run cira core
Popen(['gnome-terminal', '-x', 'bash', '-c', 'LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/usr/local/lib && source /opt/ros/melodic/setup.bash && source
~/.cira_core_install/cira_libs_ws/install/setup.bash --extend && export LD_LIBRARY_PATH=$(find /usr/lib -iname nvidia-* -type d 2>&1 | sed "[:q;N;s/
\n/:g;");LD_LIBRARY_PATH && export LD_LIBRARY_PATH=/opt/qt511/lib && roslaunch cira_core cira_core_run _selected:=true
_file=/home/...../Desktop/Detect_Label_12.4.21_Rev.2.np) _hide_toolbar:=true _lock:=true _fullscreen:=true; sleep 25; done ;$SHELL'])
time.sleep(2)

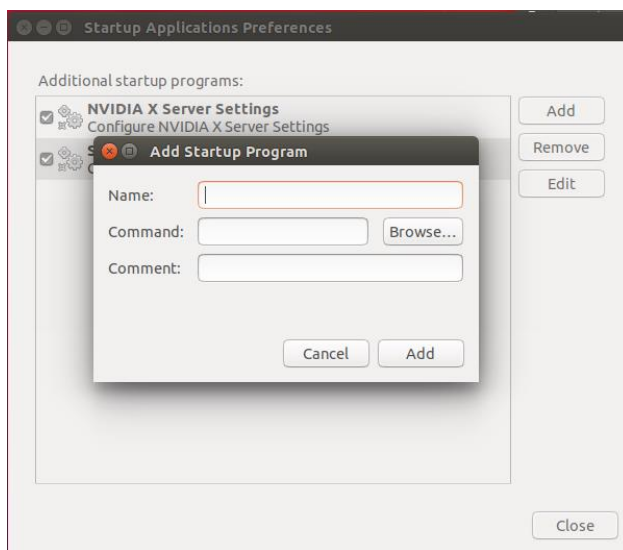
```

*Change directory to your .npj Files

4. Go to Search for files or Ctrl+F >> Startup Applications



5. Select “Add”

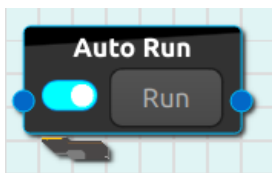


- Name : create a startup name
- Command : path to run
jetson_cira_autorun.py
- Comment : description of name

```
gnome-terminal -e "python /home/.../Desktop/jetson_cira_autorun.py"
```

* Copy text in the box and paste to command and Change to your directory of jetson_cira_autorun.py file

6. In CiRA CORE use Auto Run Button to Auto Run



7. Restart Jetson

Use Schedule Reboot

If you want to use schedule_reboot for setting time to reboot CiRA CORE on Ubuntu or Jetson

1.Uncomment (delete #) below line # 5 schedule reboot.

```
cira_robot_autorun.py (~/Desktop/CiRACORE_AutoRun/01_Ubuntu18.04) - gedit
cira_robot_autorun.py
~/Desktop/CiRACORE_AutoRun/01_Ubuntu18.04
Save

import os
from urllib import unquote
from subprocess import Popen
import time

print('##### CiRA_ROBOT Autorun #####')
import getpass
username = getpass.getuser()
print('user : ', username)

time.sleep(3)

# 1 run ros core
Popen(["gnome-terminal", '-x', 'bash', '-c', 'source /opt/ros/kinetic/setup.bash && roscore'])
time.sleep(3)

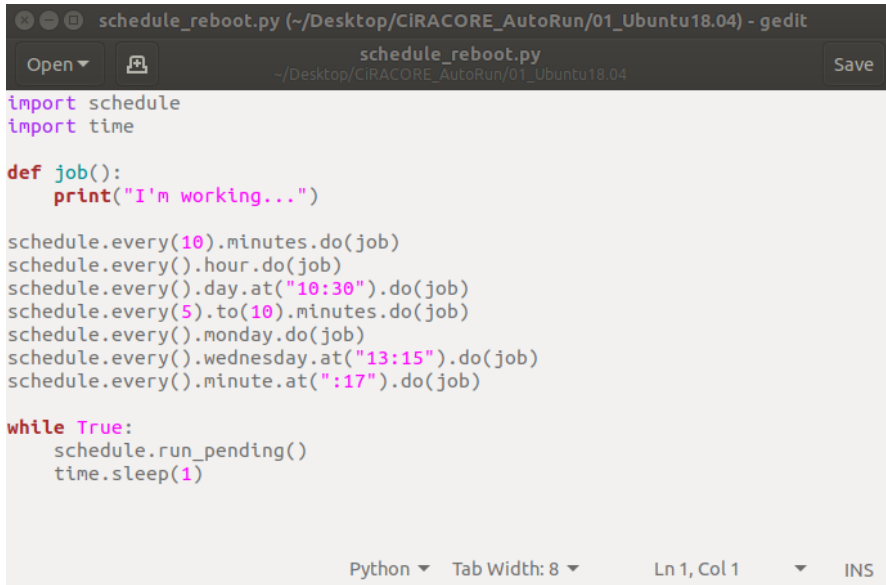
# 5 schedule reboot
#open(["gnome-terminal", '-x', 'bash', '-c', 'python ~/cira_startup/schedule_reboot.py'])
#time.sleep(2)

import subprocess
import shlex
def run_command(command):
    process = subprocess.Popen(command, stdout=subprocess.PIPE)
    while True:
        output = process.stdout.readline()
        if output == '' and process.poll() is not None:
            break
        if output:
            print output.strip()
    rc = process.poll()
    return rc

# 6 run cira core
Popen(["gnome-terminal", '-x', 'bash', '-c', 'LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/usr/local/lib && source /opt/ros/kinetic/
setup.bash && source ~/.cira_core_install/cira_libs_ws/install/setup.bash --extend && source ~/robots_ws/devel/setup.bash --
extend && export LD_LIBRARY_PATH=$(find /usr/lib -iname nvidia-* -type d 2>&1 | sed "[:q;N;s/\\n/:/g;t q]");${LD_LIBRARY_PATH}
&& export LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:/opt/qt511/lib && while true; do roslaunch cira_core_robot cira_core_robot_run
_selected:=true _file:=~/home/wutthikorn/as.np3/_hide_toolbar:=true _fullscreen:=true; sleep 2s; done ;$SHELL'])
time.sleep(2)
print('##### END #####')

Python Tab Width: 8 Ln 1, Col 1 INS
```

2. Setting time that you want to make schedule reboot.



```
schedule_reboot.py (~/Desktop/CiRACORE_AutoRun/01_Ubuntu18.04) - gedit
Open  schedule_reboot.py  Save
~/Desktop/CiRACORE_AutoRun/01_Ubuntu18.04

import schedule
import time

def job():
    print("I'm working...")

schedule.every(10).minutes.do(job)
schedule.every().hour.do(job)
schedule.every().day.at("10:30").do(job)
schedule.every(5).to(10).minutes.do(job)
schedule.every().monday.do(job)
schedule.every().wednesday.at("13:15").do(job)
schedule.every().minute.at(":17").do(job)

while True:
    schedule.run_pending()
    time.sleep(1)
```

Python Tab Width: 8 Ln 1, Col 1 INS

3. Restart PC/Laptop or Jetson

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