

rpicam-apps examples

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References

Object detection

Pose estimation

Use rpicam-apps to run IMX500 object detection and pose estimation examples.

References

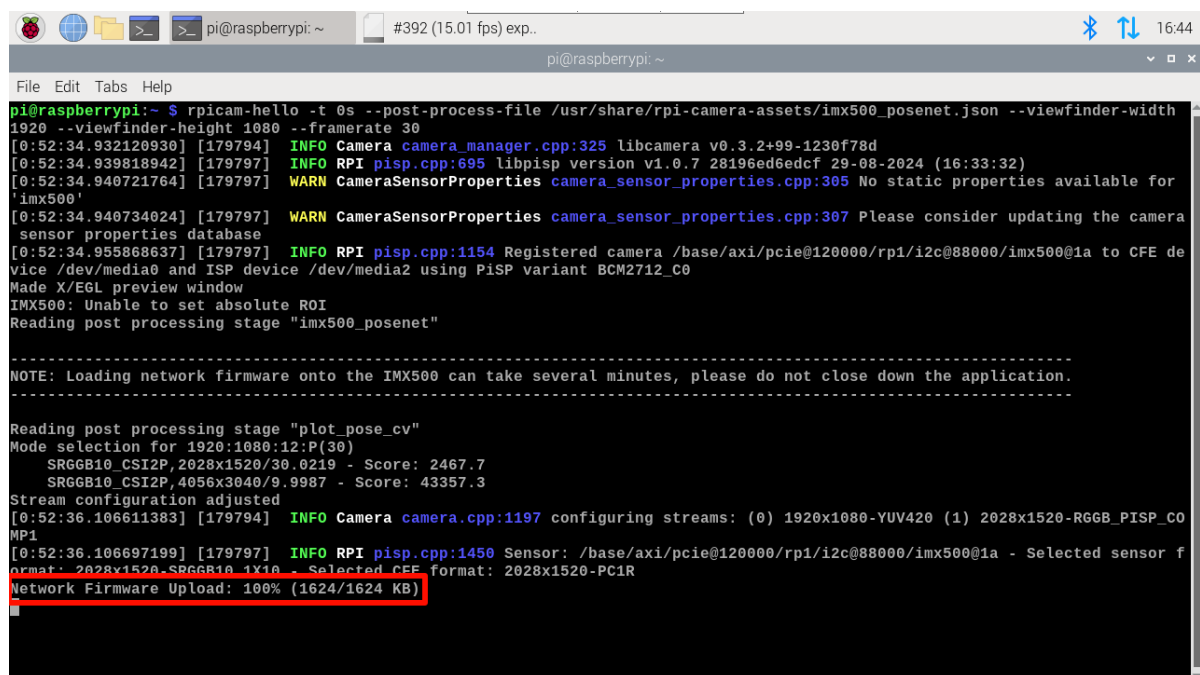
Official website of Raspberry Pi AI Camera

<https://www.raspberrypi.com/documentation/accessories/ai-camera.html>

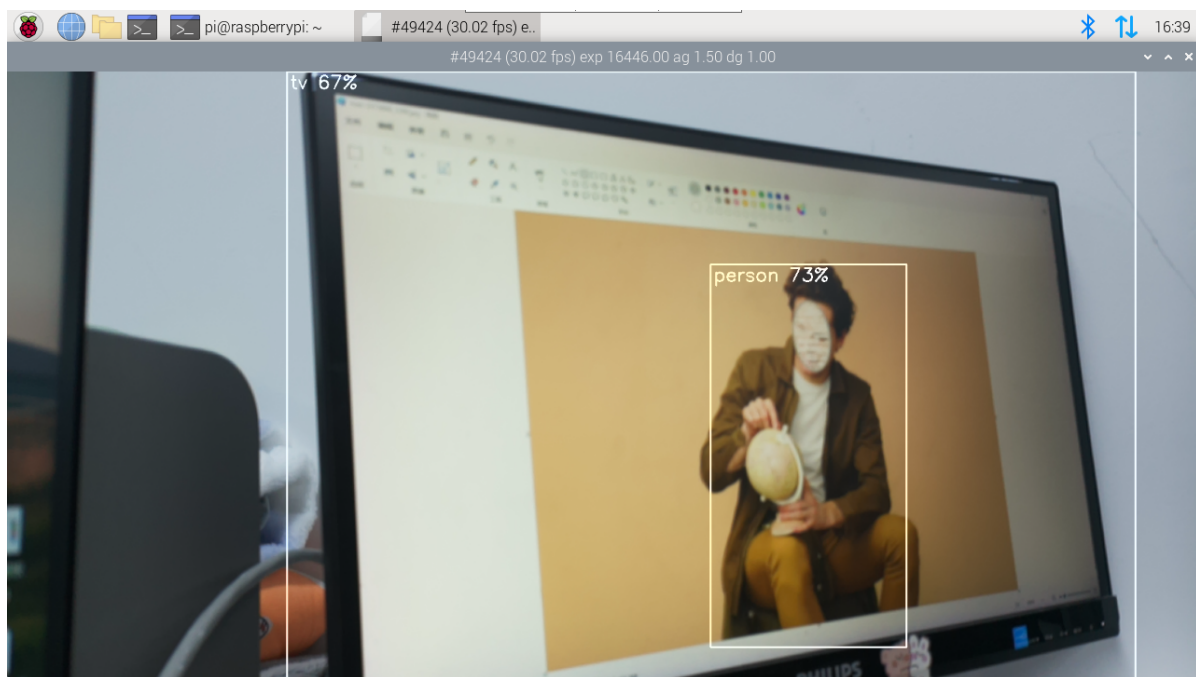
Object detection

Terminal run command: The image will be displayed only after the neural network model is loaded successfully

```
rpicam-hello -t 0s --post-process-file /usr/share/rpi-camera-  
assets/imx500_mobilenet_ssd.json --viewfinder-width 1920 --viewfinder-height 1080  
--framerate 30
```



```
pi@raspberrypi: ~  
#392 (15.01 fps) exp..  
File Edit Tabs Help  
pi@raspberrypi:~$ rpicam-hello -t 0s --post-process-file /usr/share/rpi-camera-assets/imx500_posenet.json --viewfinder-width  
1920 --viewfinder-height 1080 --framerate 30  
[0:52:34.932120930] [179794] INFO Camera camera_manager.cpp:325 libcamera v0.3.2+99-1230f78d  
[0:52:34.939818942] [179797] INFO RPI pisp.cpp:695 libpisp version v1.0.7 28196ed6edcf 29-08-2024 (16:33:32)  
[0:52:34.940721764] [179797] WARN CameraSensorProperties camera_sensor_properties.cpp:305 No static properties available for  
'imx500'  
[0:52:34.940734024] [179797] WARN CameraSensorProperties camera_sensor_properties.cpp:307 Please consider updating the camera  
sensor properties database  
[0:52:34.955868637] [179797] INFO RPI pisp.cpp:1154 Registered camera /base/axi/pcie@120000/rp1/i2c@88000/imx500@1a to CFE de  
vice /dev/media0 and ISP device /dev/media2 using PiSP variant BCM2712_C0  
Made X/EGL preview window  
IMX500: Unable to set absolute ROI  
Reading post processing stage "imx500_posenet"  
-----  
NOTE: Loading network firmware onto the IMX500 can take several minutes, please do not close down the application.  
-----  
Reading post processing stage "plot_pose_cv"  
Mode selection for 1920:1080:12:P(30)  
SRGBB10_CSI2P,2028x1520/30.0219 - Score: 2467.7  
SRGBB10_CSI2P,4056x3040/9.9987 - Score: 43357.3  
Stream configuration adjusted  
[0:52:36.106611383] [179794] INFO Camera camera.cpp:1197 configuring streams: (0) 1920x1080-YUV420 (1) 2028x1520-RGGB_PISP_CO  
MP1  
[0:52:36.106697199] [179797] INFO RPI pisp.cpp:1450 Sensor: /base/axi/pcie@120000/rp1/i2c@88000/imx500@1a - Selected sensor f  
ormat: 2028x1520-SRGBB10_1X10 - Selected CFE format: 2028x1520-PC1R  
Network Firmware Upload: 100% (1624/1624 KB)
```



Pose estimation

Terminal run command: The screen will be displayed only after the neural network model is loaded successfully

```
rpivid -t 0s --post-process-file /usr/share/rpi-camera-assets/imx500_posenet.json --viewfinder-width 1920 --viewfinder-height 1080 --framerate 30
```

