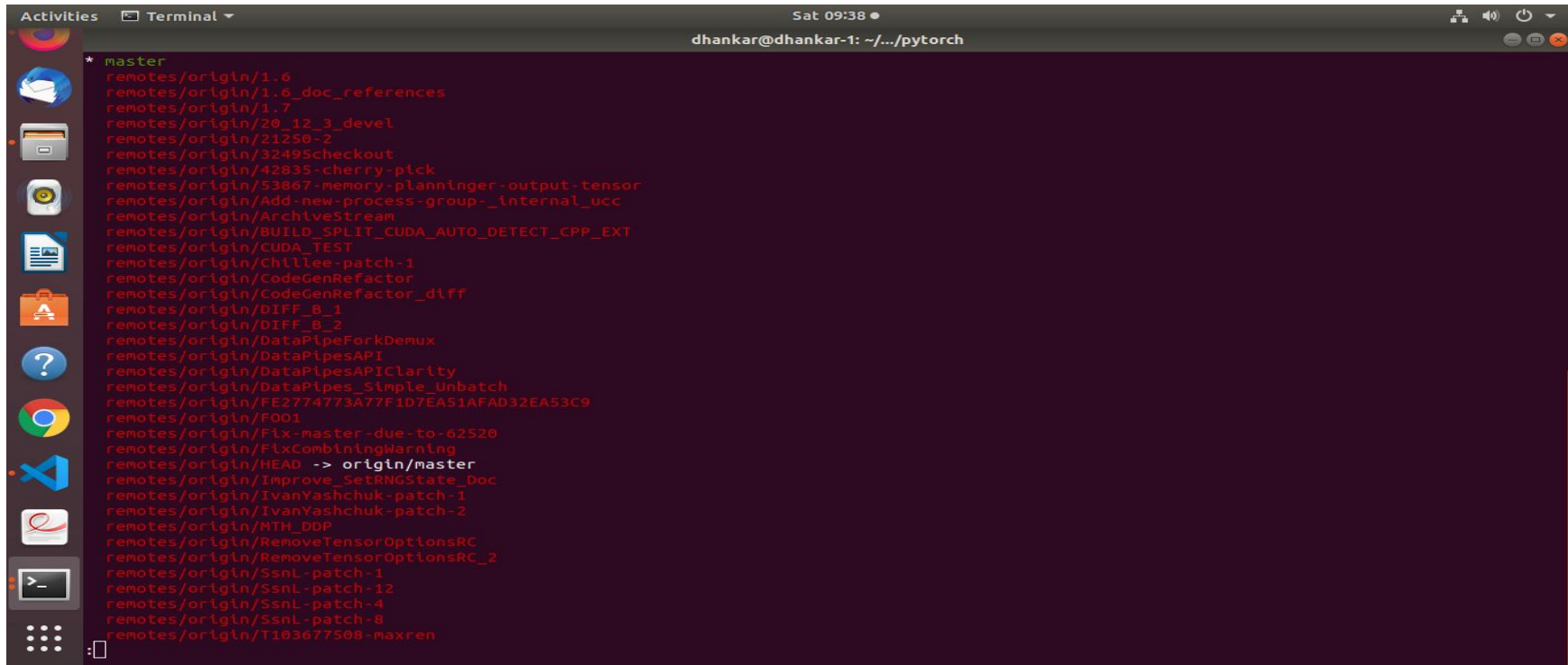


intro\_nn\_for\_img

# Pytorch - a big fan of Soumith Chintala ( <https://github.com/soumith> )



The image shows a terminal window titled "Terminal" with the user "dhankar@dhankar-1" in the directory "~/.../pytorch". The terminal displays the output of the command `git branch`, listing various branches. The branches are listed in a column, with the current branch "master" marked with an asterisk. The branches include:

- remotes/origin/1.6
- remotes/origin/1.6\_doc\_references
- remotes/origin/1.7
- remotes/origin/20\_12\_3\_devel
- remotes/origin/21250-2
- remotes/origin/32495checkout
- remotes/origin/42835-cherry-pick
- remotes/origin/53867-memory-planner-output-tensor
- remotes/origin/Add-new-process-group-\_internal\_ucc
- remotes/origin/ArchiveStream
- remotes/origin/BUILD\_SPLIT\_CUDA\_AUTO\_DETECT\_CPP\_EXT
- remotes/origin/CUDA\_TEST
- remotes/origin/Chilliee-patch-1
- remotes/origin/CodeGenRefactor
- remotes/origin/CodeGenRefactor\_diff
- remotes/origin/DIFF\_B\_1
- remotes/origin/DIFF\_B\_2
- remotes/origin/DataPipeForkDemux
- remotes/origin/DataPipesAPI
- remotes/origin/DataPipesAPIClarity
- remotes/origin/DataPipes\_Simple\_Unbatch
- remotes/origin/FE2774773A77F1D7EA51AFAD32EA53C9
- remotes/origin/FO01
- remotes/origin/Flx-master-due-to-62520
- remotes/origin/FlxCombiningWarning
- remotes/origin/HEAD -> origin/master
- remotes/origin/Improve\_SetRNGState\_Doc
- remotes/origin/IvanYashchuk-patch-1
- remotes/origin/IvanYashchuk-patch-2
- remotes/origin/MTM\_DDP
- remotes/origin/RemoveTensorOptionsRC
- remotes/origin/RemoveTensorOptionsRC\_2
- remotes/origin/SsnL-patch-1
- remotes/origin/SsnL-patch-12
- remotes/origin/SsnL-patch-4
- remotes/origin/SsnL-patch-8
- remotes/origin/T103677508-maxren

...clone and view the branches ... lots of branches

View the Git Commit Logs ...lots of active development

# Git Logs - Author , Dates , Summary etc

```
Activities Terminal Sat 09:40 ● dhankar@dhankar-1: ~/.../pytorch

Differential Revision: D33274057
fbshiplt-source-id: b2e6a078211320d97c41ffadd3ecedfab57e3b77

commit 65faf1a7eb07129d8b1f017fac341e178620dabd
Author: Jerry Zhang <jerryzh@fb.com>
Date: Thu Dec 30 19:58:11 2021 -0800

[fx2trt] Add version check for ProfilingVerbosity builder config (#70286)

Summary:
Pull Request resolved: https://github.com/pytorch/pytorch/pull/70286

att

Test Plan:
python test/fx2trt/test_quant_trt.py

Imported from OSS

Reviewed By: soulitzer

Differential Revision: D33274058
fbshiplt-source-id: c7657f9ba8b578d40d6fc1793b8b36389870e0ee

commit 6bc06ec3c2c1fc39e17040193da4067422f535cb
Author: Salil Desai <salil.desai@fb.com>
Date: Thu Dec 30 14:56:12 2021 -0800

[PyTorch Edge][QNNPack] Tighten Step Height for Indirection Buffers (#70530)

Summary:
Pull Request resolved: https://github.com/pytorch/pytorch/pull/70530

'''kernel_size + (output_width * step_width - 1) * kernel_height''' is more spa
tep_width * kernel_height''' is just enough.
```

```
Activities Terminal Sat 09:39 ● dhankar@dhankar-1: ~/.../pytorch

commit ce86881afadc0fea628c7e47d64a4073f3e09894 (HEAD -> master, origin/vlable/strict, origin/master, origin/gh/Lezcano/46/base, origin/fbcode
/warn, origin/HEAD)
Author: Jerry Zhang <jerryzh@fb.com>
Date: Thu Dec 30 23:29:00 2021 -0800

[quant][graphmode][fx] Add qat module mapping support in backend_config_dict (#70287)

Summary:
Pull Request resolved: https://github.com/pytorch/pytorch/pull/70287

This PR adds the support to configuring qat modules for fused/non-fused modules
TODO: there are some redundant configs, especially for fused op patterns, we can clean them up later

Test Plan:
python test/fx2trt/test_quant_trt.py TestQuantizeFxTRTOps

Imported from OSS

Reviewed By: vkuzo

Differential Revision: D33274057
fbshiplt-source-id: b2e6a078211320d97c41ffadd3ecedfab57e3b77

commit 65faf1a7eb07129d8b1f017fac341e178620dabd
Author: Jerry Zhang <jerryzh@fb.com>
Date: Thu Dec 30 19:58:11 2021 -0800

[fx2trt] Add version check for ProfilingVerbosity builder config (#70286)

Summary:
Pull Request resolved: https://github.com/pytorch/pytorch/pull/70286

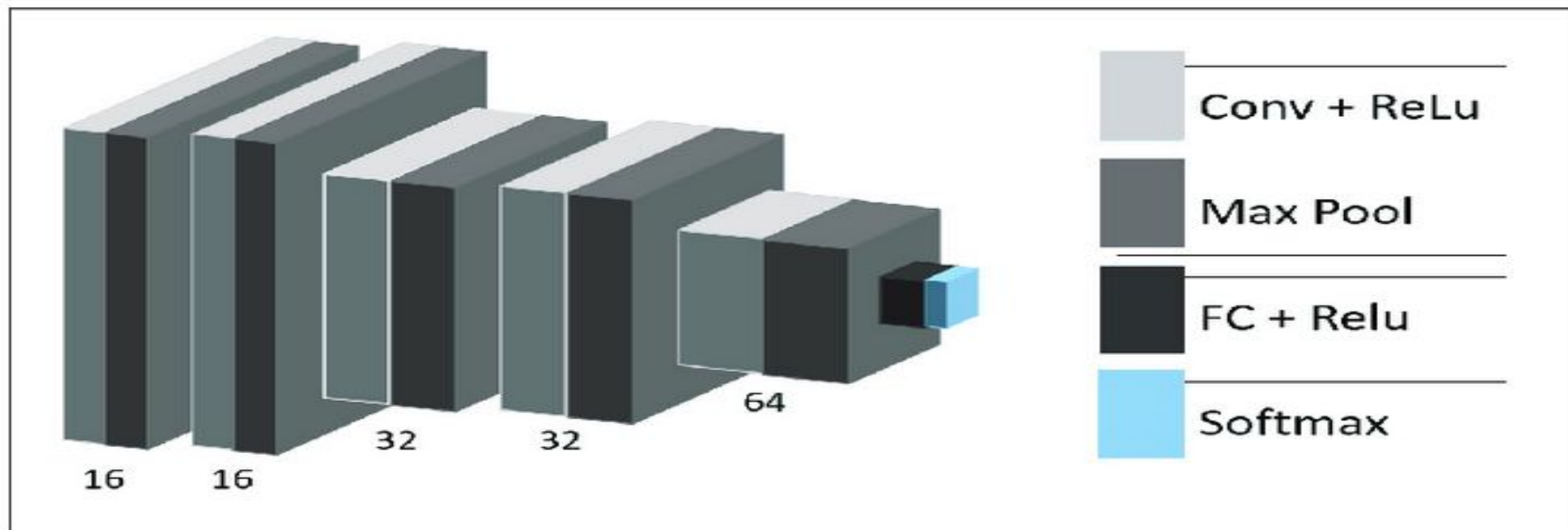
att

Test Plan:
python test/fx2trt/test_quant_trt.py
```

**Whats Image Processing ?** — Image processing is defined as the use of computerized algorithms for the analysis of images with respect to an application. Source  
(<https://www.sciencedirect.com/topics/engineering/image-processing> )

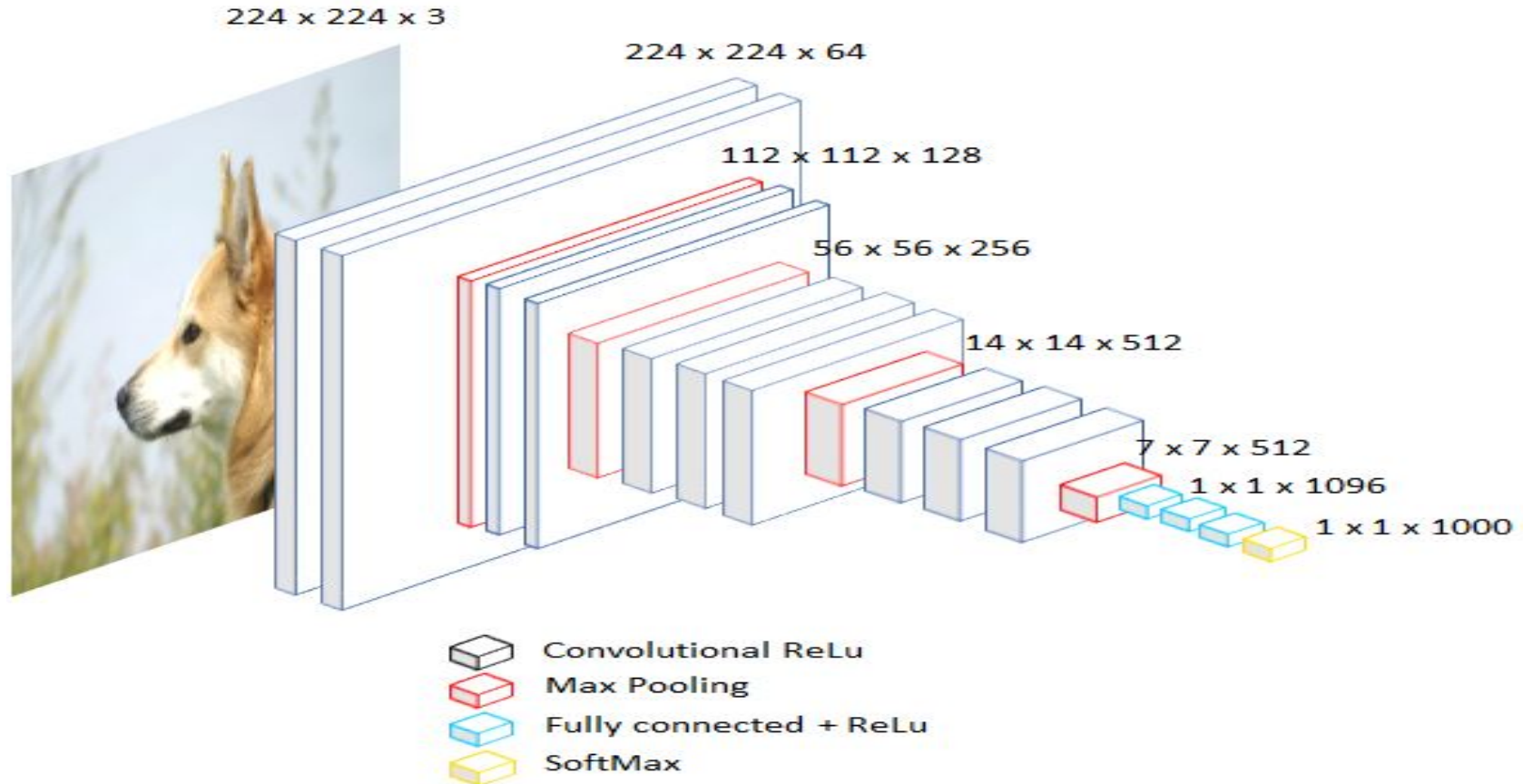
# CNN - Architecture | Source >>

[https://www.researchgate.net/figure/CNN-architecture-Conv-convolutional-layer-Max-Pool-max-pooling-operation-ReLU\\_fig1\\_347694537](https://www.researchgate.net/figure/CNN-architecture-Conv-convolutional-layer-Max-Pool-max-pooling-operation-ReLU_fig1_347694537)



| CNN architecture. Conv, convolutional layer; Max Pool, max-pooling operation; ReLU, rectified linear unit; FC, fully connected layer; Softmax, softmax layer.

# CNN - Architecture | Source >> VICTOR ROMAN | <https://rromanss23.medium.com/>



# CNN - Architecture | Source >> Prof AHLAD KUMAR

[https://www.youtube.com/watch?v=0zbhg79i\\_Bs](https://www.youtube.com/watch?v=0zbhg79i_Bs)

12:58 PM Mon 23 Dec

Untitled Notebook (1)

Ahmad  
Kumar

## Convolution Block from scratch

```
[ ] 1 import numpy as np
    2 from numpy import asarray
    3 import cv2
    4 import matplotlib.pyplot as plt
    5 from tensorflow.examples.tutorials.mnist import input_data
```

```
[ ] 1 img = cv2.imread('lena.jpeg', cv2.IMREAD_GRAYSCALE)/255
    2 plt.imshow(img, cmap = 'gray')
    3 plt.show()
    4 img.shape
```

