```
================================================================================
The summary of the 6-layer CNN network:
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Classifier_1d_6_conv_v2(
  (raw): Sequential(
    (0): SepConv1d_v4(
      (layers): Sequential(
        (0): Conv2d(2, 2, kernel_size=(1, 8), stride=(1, 2), padding=(0, 3), groups=2)
        (1): Conv2d(2, 32, kernel_size=(1, 1), stride=(1, 1))
        (2): BatchNorm2d(32, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (3): ReLU(inplace=True)
        (4): Dropout(p=0.5, inplace=False)
      )
    )
    (1): SepConv1d_v4(
      (layers): Sequential(
        (0): Conv2d(32, 32, kernel_size=(1, 8), stride=(1, 4), padding=(0, 2), groups=32)
        (1): Conv2d(32, 64, kernel_size=(1, 1), stride=(1, 1))
        (2): BatchNorm2d(64, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (3): ReLU(inplace=True)
        (4): Dropout(p=0.5, inplace=False)
      )
    )
    (2): SepConv1d_v4(
      (layers): Sequential(
        (0): Conv2d(64, 64, kernel_size=(1, 8), stride=(1, 4), padding=(0, 2), groups=64)
        (1): Conv2d(64, 128, kernel_size=(1, 1), stride=(1, 1))
        (2): BatchNorm2d(128, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (3): ReLU(inplace=True)
        (4): Dropout(p=0.5, inplace=False)
      )
    )
    (3): SepConv1d_v4(
      (layers): Sequential(
        (0): Conv2d(128, 128, kernel_size=(1, 8), stride=(1, 4), padding=(0, 2), groups=128)
        (1): Conv2d(128, 256, kernel_size=(1, 1), stride=(1, 1))
        (2): BatchNorm2d(256, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
        (3): ReLU(inplace=True)
        (4): Dropout(p=0.5, inplace=False)
      )
    )
    (4): SepConv1d_v4(
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    (layers): Sequential(
      (0): Conv2d(256, 256, kernel_size=(1, 8), stride=(1, 4), padding=(0, 2), groups=256)
      (1): Conv2d(256, 512, kernel_size=(1, 1), stride=(1, 1))
      (2): BatchNorm2d(512, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (3): ReLU(inplace=True)
      (4): Dropout(p=0.5, inplace=False)
    )
  )
  (5): SepConv1d_v4(
    (layers): Sequential(
      (0): Conv2d(512, 512, kernel_size=(1, 8), stride=(1, 4), padding=(0, 2), groups=512)
      (1): Conv2d(512, 1024, kernel_size=(1, 1), stride=(1, 1))
      (2): BatchNorm2d(1024, eps=1e-05, momentum=0.1, affine=True, track_running_stats=True)
      (3): ReLU(inplace=True)
      (4): Dropout(p=0.2, inplace=False)
    )
  )
)
(FC): Sequential(
  (0): Flatten()
  (1): Linear(in_features=1024, out_features=128, bias=True)
  (2): ReLU(inplace=True)
  (3): Dropout(p=0.5, inplace=False)
  (4): Linear(in_features=128, out_features=128, bias=True)
  (5): ReLU(inplace=True)
  (6): Dropout(p=0.5, inplace=False)
)
(out): Sequential(
  (0): Linear(in_features=128, out_features=2, bias=True)
)
(quant): QuantStub()
(dequant): DeQuantStub()
)


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Table of the network parameters:
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        Layer (type)              Output Shape         Param #
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================================================================
        QuantStub-1          [512, 2, 2048]            0
          Conv2d-2         [512, 2, 1, 1024]           18
          Conv2d-3        [512, 32, 1, 1024]           96
     BatchNorm2d-4        [512, 32, 1, 1024]           64
            ReLU-5        [512, 32, 1, 1024]            0
         Dropout-6        [512, 32, 1, 1024]            0
    SepConv1d_v4-7        [512, 32, 1, 1024]            0
          Conv2d-8         [512, 32, 1, 256]          288
          Conv2d-9         [512, 64, 1, 256]        2,112
    BatchNorm2d-10         [512, 64, 1, 256]          128
           ReLU-11         [512, 64, 1, 256]            0
        Dropout-12         [512, 64, 1, 256]            0
   SepConv1d_v4-13         [512, 64, 1, 256]            0
         Conv2d-14          [512, 64, 1, 64]          576
         Conv2d-15         [512, 128, 1, 64]        8,320
    BatchNorm2d-16         [512, 128, 1, 64]          256
           ReLU-17         [512, 128, 1, 64]            0
        Dropout-18         [512, 128, 1, 64]            0
   SepConv1d_v4-19         [512, 128, 1, 64]            0
         Conv2d-20         [512, 128, 1, 16]        1,152
         Conv2d-21         [512, 256, 1, 16]       33,024
    BatchNorm2d-22         [512, 256, 1, 16]          512
           ReLU-23         [512, 256, 1, 16]            0
        Dropout-24         [512, 256, 1, 16]            0
   SepConv1d_v4-25         [512, 256, 1, 16]            0
         Conv2d-26          [512, 256, 1, 4]        2,304
         Conv2d-27          [512, 512, 1, 4]      131,584
    BatchNorm2d-28          [512, 512, 1, 4]        1,024
           ReLU-29          [512, 512, 1, 4]            0
        Dropout-30          [512, 512, 1, 4]            0
   SepConv1d_v4-31          [512, 512, 1, 4]            0
         Conv2d-32          [512, 512, 1, 1]        4,608
         Conv2d-33         [512, 1024, 1, 1]      525,312
    BatchNorm2d-34         [512, 1024, 1, 1]        2,048
           ReLU-35         [512, 1024, 1, 1]            0
        Dropout-36         [512, 1024, 1, 1]            0
   SepConv1d_v4-37         [512, 1024, 1, 1]            0
        Flatten-38              [512, 1024]            0
         Linear-39               [512, 128]      131,200
           ReLU-40               [512, 128]            0
        Dropout-41               [512, 128]            0
         Linear-42               [512, 128]       16,512
           ReLU-43               [512, 128]            0
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          Dropout-44                   [512, 128]                   0
           Linear-45                     [512, 2]                 258
      DeQuantStub-46                     [512, 2]                   0
================================================================
Total params: 861,396
Trainable params: 861,396
Non-trainable params: 0
----------------------------------------------------------------
Input size (MB): 8.00
Forward/backward pass size (MB): 1353.02
Params size (MB): 3.29
Estimated Total Size (MB): 1364.30
----------------------------------------------------------------
Traceback (most recent call last):

  File "<ipython-input-136-7162490e2b47>", line 1, in <module>
    runfile('/home/bhossein/BMBF project/Reports/Rep_23Jan_quantization_dyn_range.py', wdir='/home/bhossein/BMBF project/Reports')

  File "/home/bhossein/.local/lib/python3.5/site-packages/spyder_kernels/customize/spydercustomize.py", line 827, in runfile
    execfile(filename, namespace)

  File "/home/bhossein/.local/lib/python3.5/site-packages/spyder_kernels/customize/spydercustomize.py", line 110, in execfile
    exec(compile(f.read(), filename, 'exec'), namespace)

  File "/home/bhossein/BMBF project/Reports/Rep_23Jan_quantization_dyn_range.py", line 144, in <module>
    assert 1==2

AssertionError


In [137]:

In [137]:
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