```
Python 3.8.5 (default, Sep  3 2020, 21:29:08) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.19.0 -- An enhanced Interactive Python.

Restarting kernel...
```

```
 runfile('C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST/all_methods_on_mnist_conv4.py',
wdir='C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST')
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\ApplyingCNN\MNIST
```

In [1]:

```
  File "C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\ApplyingCNN\MNIST\all_methods_on_mnist_conv4.py", line
11, in <module>
    os.chdir(str(Path(os.getcwd()).parents[1]))

NameError: name 'Path' is not defined
```

In [2]:   'C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST/all_methods_on_mnist_conv4.py'
    ='C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST'

```
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\ApplyingCNN\MNIST
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\PackagesAndModels
Information on dataset
x_train (10000, 1, 28, 28)
targets_train (10000,)
x_valid (1000, 1, 28, 28)
targets_valid (1000,)
x_test (1000, 1, 28, 28)
targets_test (1000,)
Normal time:0.1418015956878662
4D time:0.16199016571044922
3D time:0.21625590324401855
BAF4D time:0.0803520679473877
BAF3D time:0.08035159111022949
ATDC3D time:0.09820771217346191
ATDC4D time:0.0902714729309082
```

In [3]:   'C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST/all_methods_on_mnist_conv500.py'
    ='C:/Users/kee/OneDrive/Dokumenter/MMC/Master Thesis/Git/Speciale/
TensorizedTrainingMethods/ApplyingCNN/MNIST'
Reloaded modules: pack, method_functions, train_val_test_MNIST, MNIST_MODELS

```
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\ApplyingCNN\MNIST
```

```
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\PackagesAndModels
Information on dataset
x_train (10000, 1, 28, 28)
targets_train (10000,)
x_valid (1000, 1, 28, 28)
targets_valid (1000,)
x_test (1000, 1, 28, 28)
targets_test (1000,)
Normal:0.5733161370754242
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\PackagesAndModels\method_functions.py:321:
UserWarning: To copy construct from a tensor, it is recommended to use
sourceTensor.clone().detach() or
sourceTensor.clone().detach().requires_grad_(True), rather than
torch.tensor(sourceTensor).
  decomp =
tl.decomposition.parafac(tl.tensor(torch.tensor(weights).permute(1,2,3,0)),
rank=rank)
C:\Users\kee\OneDrive\Dokumenter\MMC\Master Thesis\Git\Speciale
\TensorizedTrainingMethods\PackagesAndModels\method_functions.py:406:
UserWarning: To copy construct from a tensor, it is recommended to use
sourceTensor.clone().detach() or
sourceTensor.clone().detach().requires_grad_(True), rather than
torch.tensor(sourceTensor).
  decomp =
tl.decomposition.parafac(tl.tensor(torch.tensor(weights).permute(1,2,3,0)),
rank=rank)
4D:1.0818506333827973
3D:0.98867986369133
ATCD3D:0.595585598230362
ATCD3D:0.565005154132843
```

In [4]: