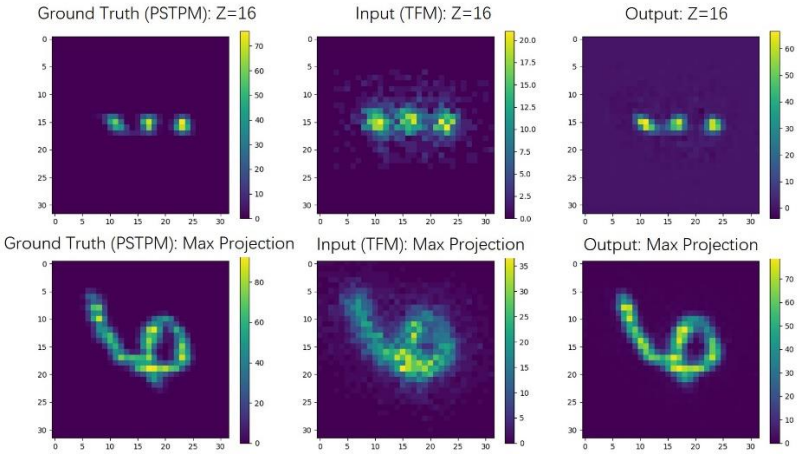
Configurations:

Suggested Environment: Matlab+Visual Studio Code +Python 3.6.4 + Tensorflow 2.5;

Data format: Set mat version in MATLAB to be 7.3 or higher (On the Home tab, in the Environment section, click Preferences. Select MATLAB > General > MAT-Files.) ;

We offer two examples for demonstration purpose: Toy example and Spine Example.

Toy example (MNIST Digit):



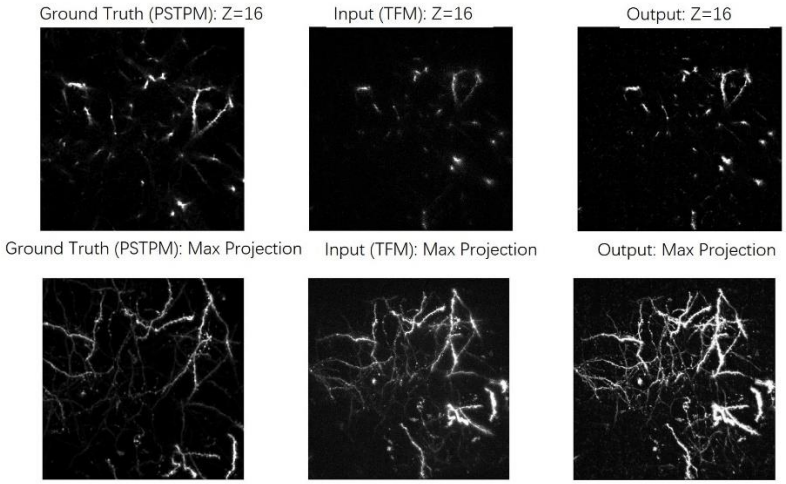
There are 3 steps in total in this shared code:

Step 1. Generate training data with **main_forward.m**:

Step 2. Train the network with **main_inverse.py**:

Step 3. Display your results with **Display_Results.py**.

Spine example:



Data downloading: Download the data from Zenodo:
http://doi.org/10.5281/zenodo.4972170
Put the two folders “PSTPM_data” and “Results” under the path . /Spine_Example.

To display the results, use Results_Demo.m, where we have also offered " mScarlet-I" experimental results as an example.

There are 3 steps in total in this shared code to train and test the model:

Step 1. Generate training data with **main_forward.m**: The PSTPM stack are contained in the "PSTPM_data" folder, where others can put their own PSTPM data in the folder to generate training data.

Step 2. Train the network with **main_inverse.py**:

Step 3. Test and Save the test results with the file **Save_data.py**: Remember to replace the trained model name.

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