

cuTensor

cuTensor is a library for data recovery based on GPUS using the Tubal-Alt-Min algorithm. It can complete 3-D low-tubal-rank tensors with good convergence rate, small relative error and fast speed.

Environment Required

This library requires CUDA 8.0 or higher and an NVIDIA GPU with compute capability 4.0 or higher. More than 4GB device memory is preferred.

Compiling the documentation

You will need to clone the repository from our cite.Then open the terminal and change into the directory and type the following command:

```
make
```

this will use the Makefile to start compiling the library.

Data Organize

We require data organized slice by slice in row index.

Usage

The users are only required to specify the length of three dimensions.For example,you can use the following command to complete a 1080*720*20 tensor:

```
cuTensor 1080 720 20 data
```

then the recovered data will be placed in the same directory.

