

# Readme

## Prerequisite

1. Python3

## Installation of Libraries

To install the libraries in your computer run the script.sh file using the following the command on terminal.

- `chmod +x scripts.sh`
- `./scripts.sh`

## Running the code

Run the following command on terminal to run the python code.

Test case example:

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- `mpirun --mca btl_tcp_if_include eno1 --hostfile hostfile -np 8 python3 Group14.py Isabel_1000x1000x200_float32.raw 2 2 2 0.5 opacity_TF.txt color_TF.txt`

- Group14.py : Name of the program
- hostfile: List of all csews nodes
- Name of the input dataset :
- **Grid Dimensions ( PX PY PZ: 2 2 2):** Defines how the data will be divided in a 3D grid across the MPI processes. For example, 2 2 2 divides the data into a 2x2x2 grid for a total of 8 sections, aligning with 8 processes.
- Integration step size during for ray casting algorithm
- opacity\_TF.txt: input file opacity\_TF.txt file specifying opacity settings
- color\_TF.txt : input file color\_TF.txt file defining color mappings