Appendix A

Running LVSRFIT:

Note: Everything in this file is all relative to the `model` directory.

Dataset Download

First download the full 82GB vimeo septuplet 90K dataset from here Extract the contents of the zip and place into the root of this repository. The directory should be named `vimeo_septuplet`, and it should contain a `sequences` subdirectory.

Environment

First install the required python packages `pip install -r requirements.txt`

Then use the below command to install torch with CUDA: `pip install torch==1.10.0+cu113 torchvision==0.11.1+cu113 -f https://download.pytorch.org/whl/cu113/torch_stable.html`

Data Preparation

Data preparation must be run before training or evaluation is run: `python LVSRFIT.py prepare_data`

Commands

Train the model:

- Command: `python LVSRFIT.py train <model_name> <training_set_path>`
- Example: `python LVSRFIT.py train paper_model_final .\vimeo_septuplet\sep_trainlist.txt`

Evaluate the model's accuracy:

- Command: `python LVSRFIT.py eval <model_name> <evaluation_set_path>`
- Example: `python LVSRFIT.py eval paper_model_final .\vimeo_septuplet\sep_testlist.txt`

Continuously display inference outputs:

- Command: `python LVSRFIT.py display <model_name> <evaluation_set_path>`
- Example: `python LVSRFIT.py display paper_model_final .\vimeo_septuplet\sep_testlist.txt`

Display inference outputs for a specified Vimeo file:

- Command: `python LVSRFIT.py display_one <model_name> <vimeo path> <sequence path> <optional: input sequence length>`
- Example: `python LVSRFIT.py display_one paper_model_final .\vimeo_septuplet 00096/0674 2`

Calculate the number of FPS the model can run at

- Command: `python LVSRFIT.py fps_test <model_name> <test_set_path>`
- Example: `python LVSRFIT.py fps_test paper_model_final .\vimeo_septuplet\sep_testlist.txt`

View a plot of all the Loss values in a log file

- Command: `python LVSRFIT.py observe_log <tag> <log_path>`
- Example: `python LVSRFIT.py observe_log Loss .\logs\2023-08-05-10-33-11_paper_model_final.txt`