1 stylegan2-pytorch

You will need a machine with a GPU and CUDA installed. Then pip install the package like this:
$ pip install stylegan2_pytorch To allow FID score calculation, your will additionally pip install pytorch_fid package.
$ pip install pytorch-fid To train a model from a given image file path, and saving the result to a user-defined folder, you can use:

$ stylegan2_pytorch --data /path/to/images --name my-project-name --results_dir /path/to/results/dir

To allow calculating FID, before the training, you can add following command in the end and define how many steps FID is calculated

$ --calculate-fid-every steps

To custom define training steps, you can add

$ --num-train-steps final_steps

2 stylegan2-ada

First thing you need to do is to change the format of the training set to TFRecords.

$ python dataset_tool.py create_from_images destination image_path

To train the model, you can use

$ python train.py --outdir=result_folder --gpu=1 --kimg 15000 --aug=noaug --mirror=1 --cfg=paper256 --data=/cs/home/scyhx2/datasets/custom --metrics=kid50k,fid50k

where you can define your result path, GPU usage, final training steps, training with or without ADA, mirror, training configuration, source image data, metrics respectively.

Training is often interrupted by timer, to resume training, you can use

$ python train.py --outdir=result_folder --gpus=1 --kimg resume_steps --resume=model_path

Interpolation can be achieved by providing out directory and network.

$ python interpolate.py --outdir=out_directory --network=network

Vector arithmetic can be accomplished in a similar way.

$ python vectorArithmetic.py --outdir=out_directory --network=network

To generate fake images, you can refer to **interpolate.py** or **vectorArithmetic.py**. In both scripts, **generate_image_random()** will return a fake image and its corresponding vector given a random seed, you can write a for loop according to this to create as many fake images as you want. Then do vector operations using the vectors that corresponds to these images.