Homework-2 Report

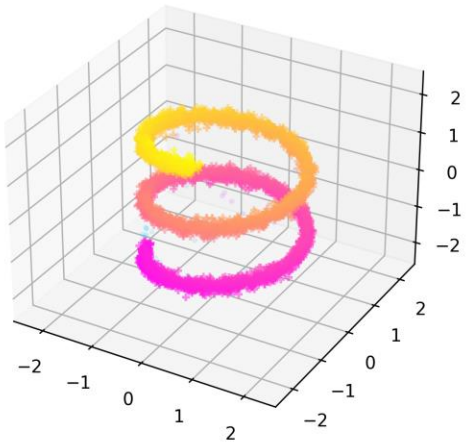
Sasank (200050045)-Saikiran (200050023)

Number of training steps:

Here we have used 5 layers for linear model and for helix:

Epochs	EMD	CHAMFER	NLL
500	58.367	32.748	2.234
1000	49.237	32.282	2.231
2000	49.475	32.673	2.232

Images for 500:



Images for 1000:

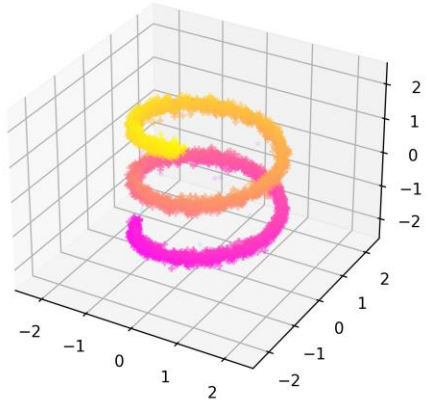
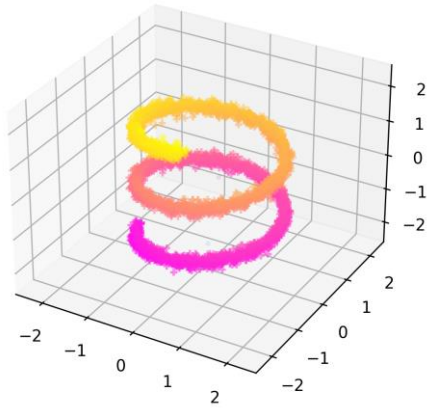


Image for 2000:



Model Complexity:

Here we are using epochs as 500,

Layers	EMD	CHAMFER	NLL
3	54.687	32.748	2.243
10	53.725	31.287	2.230
20	51.698	32.562	2.256

Diffusion :

Diffusion	EMD	CHAMFER	NLL
10	55.238	35.708	2.238
100	49.458	33.475	2.229
200	49.876	32.983	2.234

Noise Schedule:

We have used Geometric progression scheduling, cosine based scheduling, linear based scheduling,

Out of these we found the cosine to be giving better results like around 1.734 loss in training and NLL of 2.20, EMD of 48.879, chamfer of 31.976.

I think sigmoid can also give better results because it increases at a hgher pace in the beginning and ends slowly in the ending.