Train Autoencoder:

GNN Encoder → 1/2/6D Latent space → (E)GNN Decoder → 4D Space → Edge Predictor GNN

MSE Loss

Train Generative Model:

GNN Encoder → 1/2/6D Latent space → Degradation → 1/2/6D Latent space → (E)GNN based Restoration → 1/2/6D Latent space

MSE Loss

De Novo Generation:

(E)GNN based Restoration

Start with random point cloud → ... → (E)GNN Decoder → 4D Space → Edge Predictor GNN