Motion Diffusion Model to Denoising Diffusion GAN: Efficient Motion Sampling

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Abstract

1. Introduction

1.1. Improving Sampling

1.2. Integrating Motion Diffusion Model Into DDGAN

2. Related Work

2.1. Human Motion Diffusion Model

2.2. Denoising Diffusion GANs

3. Method

3.1. Motion Diffusion Model Integration

3.2. Adapting The Loss

3.3. Training

4. Experiments

5. Results

5.1. Quantitative Results

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6. Additional Applications

7. Conclusion and Future Works

References

All existing motion diffusion models use the standard diffusion process which yields high quality samples. However, the standard process for these models can be inefficient. These are one of the challenges with the learning trilemma and this works concerns embedding an existing motion diffusion model into denoising diffusion GANs to create a hybrid architecture of the motion diffusion model. The goal of our work is to improving the sampling efficiency while maintaining the quality of the motion samples.