

Comparing GAN and Diffusion Models on an Interpretable 3D Voxel Dataset

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Overview of generative models evaluated on a simple, visually interpretable 3D voxel dataset:

- Creation of an easy-to-interpret 3D voxel dataset derived from 2D characters
- Conditional WGAN-GP for fast 3D volume generation
- Conditional diffusion model for smoother and more coherent volumetric synthesis
- Evaluation using KID, PCC, and Separation Power metrics
- Comparative analysis of generative behavior across increasing dataset complexity

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