

Diffusion model (U-Net) $J_{\mathbf{x}_t}$: Jacobian of f at \mathbf{x}_t \mathbf{v}_i : *i*-th right singular vector of $J_{\mathbf{x}_i}$ $\mathcal{T}_{\mathbf{x}_{t}}: \operatorname{span}\{\mathbf{v}_{1},\cdots,\mathbf{v}_{n}\}\$ \mathbf{u}_{i} : i-th left singular vector of $J_{\mathbf{x}_{i}}$

Feature space structure

Latent space structure

(b) Notation

 $\mathcal{T}_{\mathbf{h}_t}: \operatorname{span}\{\mathbf{u}_1,\cdots,\mathbf{u}_n\}$