

Conditional image synthesis with diffusion model

Domain Translation

- ILVR
- SDEdit
- DDIB

Text to image

- Diffusion in Latent Space
  - LDM
  - Stable Diffusion
- Diffusion in Image Space
  - Imagen (T5 Encoder)
  - Glide (Transformer Encoder)
  - DALL-E2 (CLIP Encoder)

Semantic maps to image

- LDM
- ControlNet

Image Editing with text

- Text edit with CLIP
  - Asyrp
  - DiffusionCLIP
  - Blend Diffusion
  - DALL-E2
- Exploit big T2I models
  - Model fine tuning
    - Imagic
    - Forgedit
    - DreamBooth
  - DDIM Inversion
    - Diffedit
    - Prompt-to-Prompt
    - CFG Inversion Techniques
      - Direct Inversion
      - Style Diffusion
      - Null Text Inversion
      - Negative Inversion

Image Restoration

- Supervise
  - SR3
  - SR3+
  - Cascade Diffusion Model
  - Resdiff
  - IR-SDE
  - Palette
- Zero-shot
  - Solve Inverse Problems
    - DDRM
    - DPS
    - BlindDPS
  - 自由主题
  - blend with unmask information
    - Repaint
    - Blend Diffusion

Auxiliary methods for condition injecting

- Classifier-free Guidance
- BLIP
- Textual Inversion