

Conditional image synthesis  
with diffusion model

Domain Translation

- ILVR
- SDEdit
- DDIB

Text to image

- Diffusion in Latent Space
  - LDM
  - Stable Diffusion
  - VQDM
- Diffusion in Image Space
  - Imagen (T5 Encoder)
  - Glide (Transformer Encoder)
  - DALL-E2 (CLIP Encoder)
  - eDiff-I(Both T5 and CLIP Encoder)

Image guidance to image

- LDM
- ControlNet
- T2I-Adapter
- PITi
- Sketch-Guided Diffusion Model
- eDiff-I

Image Editing with text

- Text edit with CLIP
  - Asyrp
  - DiffusionCLIP
  - Blend Diffusion
  - DALL-E2
- Exploit big T2I models
  - Model fine tuning
    - Imagic
    - Forgedit
  - Inversion based methods
    - Diffedit
    - Prompt-to-Prompt
    - Plug-and-Play

Customization

- Model fine tuning
  - DreamBooth
  - CustomDiffusion
- Text embedding optimization
  - Textual Inversion

Image Restoration

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

Auxiliary technics for condition  
injecting

- Guidance Technics
  - Classifier-free Guidance
  - CLIP-Guidance
  - Classifier Guidance
- Image Captioning/Tokenizing
  - BLIP
  - Textual Inversion
  - E4T
  - P+
- Composition of Conditional Diffusion Models
  - Composable DM
- Super-Resolution for Conditional Diffusion Models
  - Cascade DM
- Retrieval based augmentation
  - KNN-Diffusion
  - RDM
  - Re-Imagen
- DDIM Inversion
  - Direct Inversion
  - Style Diffusion
  - Null Text Inversion
  - Negative Inversion
  - EDICT