

03 Data and adaptation regime

Figure 1 coordinate 3 | Subitems 10, 11, 12

Machine learning

10 Few-shot

Few examples -> adapted model
Reuse a learned source prior
Keep target traits, vary samples
Test novelty and memorization

11 Zero-shot / training-free

New condition -> prior reuse
No target generator refitting
Pretraining can still be large
Specify what receives no training

12 Data-efficient

Limited real data -> generator
Reduce the real-example budget
Keep variation, avoid overfitting
Test quality versus data count

Computer vision

— DreamBooth personalization

Few photos -> new subject views
Fine-tune a pretrained generator
Target identity, not copied views
Test identity / novelty / prompts

— RePaint without retraining

Image + mask -> filled image
Reuse an unconditional DDPM
Modify sampling, not the network
Test visible pixels / filled region

— ADA limited-data GAN

Limited images -> trained GAN
Adapt critic-side augmentation
Compare at equal data budgets
Test diversity and sample quality

Medical image analysis

— EndoFSA endoscopy

Few lesion images -> adaptation
Reuse normal-image pretraining
Generate abnormal endoscopy
Test lesions and memorization

— Score-MRI sampling reuse

Sparse MRI data -> image
Reuse a magnitude-MRI prior
No sampling-pattern refitting
Test data fit and missed lesions

— EndoFSA target-data reuse

Scarce lesions -> adapted model
Reuse a normal-data prior
Keep pretraining budget explicit
Test real-patient utility / budget