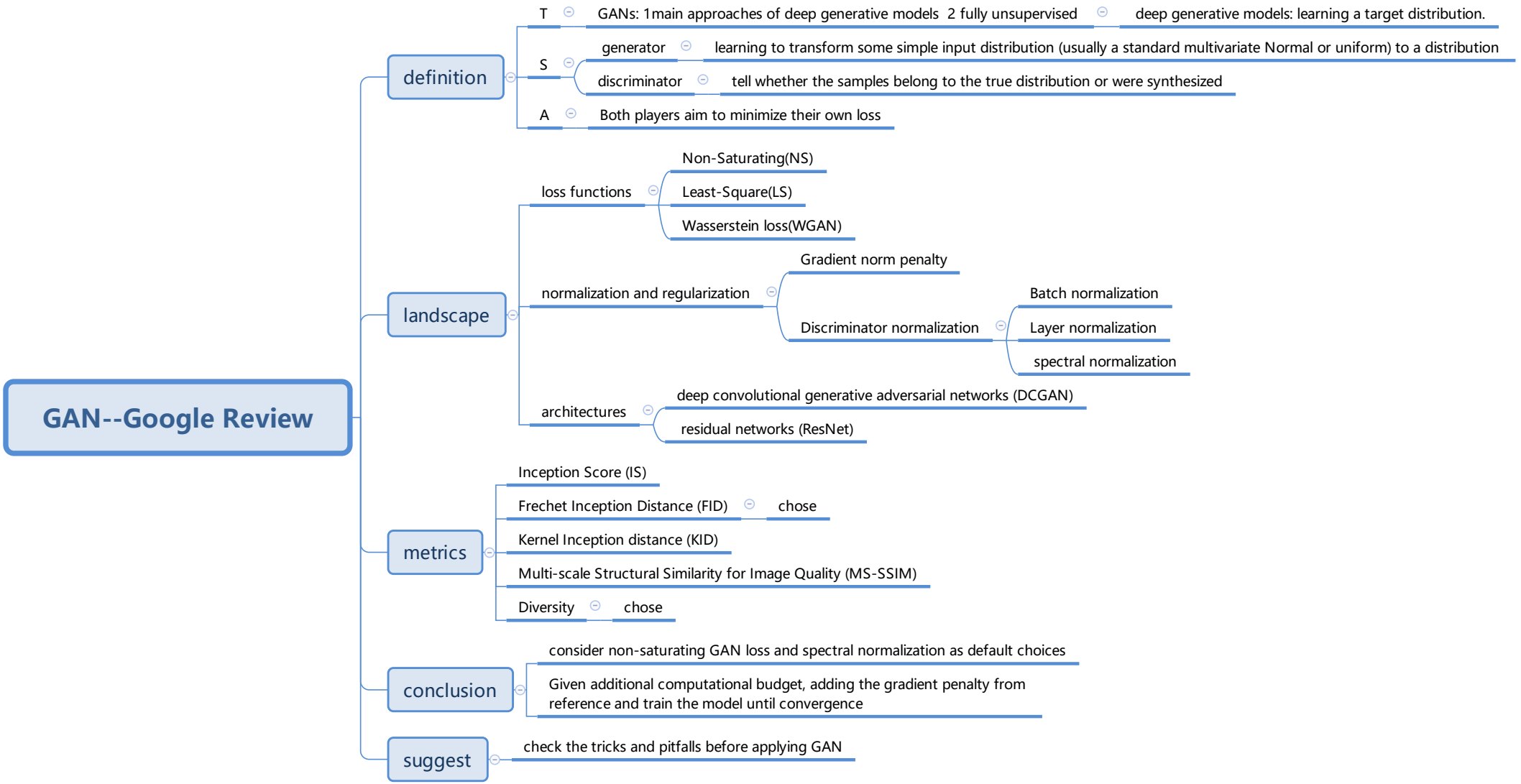
GAN--Google Review
definition
T
GANs: 1main approaches of deep generative models 2 fully unsupervised
deep generative models: learning a target distribution.
S
generator
learning to transform some simple input distribution (usually a standard multivariate Normal or uniform) to a distribution
discriminator
tell whether the samples belong to the true distribution or were synthesized
A
Both players aim to minimize their own loss
landscape
loss functions
Non-Saturating(NS)
Least-Square(LS)
Wasserstein loss(WGAN)
normalization and regularization
Gradient norm penalty
Discriminator normalization
Batch normalization
Layer normalization
spectral normalization
architectures
deep convolutional generative adversarial networks (DCGAN)
residual networks (ResNet)
metrics
Inception Score (IS)
Frechet Inception Distance (FID)
chose
Kernel Inception distance (KID)
Multi-scale Structural Similarity for Image Quality (MS-SSIM)
Diversity
chose
conclusion
consider non-saturating GAN loss and spectral normalization as default choices
Given additional computational budget, adding the gradient penalty from reference and train the model until convergence
suggest
check the tricks and pitfalls before applying GAN