training samples

$\{\boldsymbol{x}_i\}_{1 \leq i \leq n}$

sample

$\boldsymbol{x}_i$

$\mathcal{D}$

1: real
0: fake

$d\left(\cdot\right)$

sample

$\boldsymbol{z}$

$\mathcal{G}$

$g\left(\boldsymbol{z}\right)$

source distribution

$\mathbb{P}_{\boldsymbol{z}}$