

SAMPLING: DENSITIES



- Given a probability distribution π we want to sample over some state space \mathcal{X}

$$\pi(x) = \frac{\gamma(x)}{Z}$$

► Suppose we can evaluate $\gamma: X \rightarrow \mathbb{R}$ efficiently

► suppose X is some state space:

► Discrete, \mathbb{R}^d , a manifold, image, a graph, tree, a molecule, etc

► We want to be able to say something about the properties of π

- Cannot evaluate the normalising constant Z

$$Z = \int_{\mathbb{X}} \gamma(x) dx$$

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SAMPLING: POTENTIALS