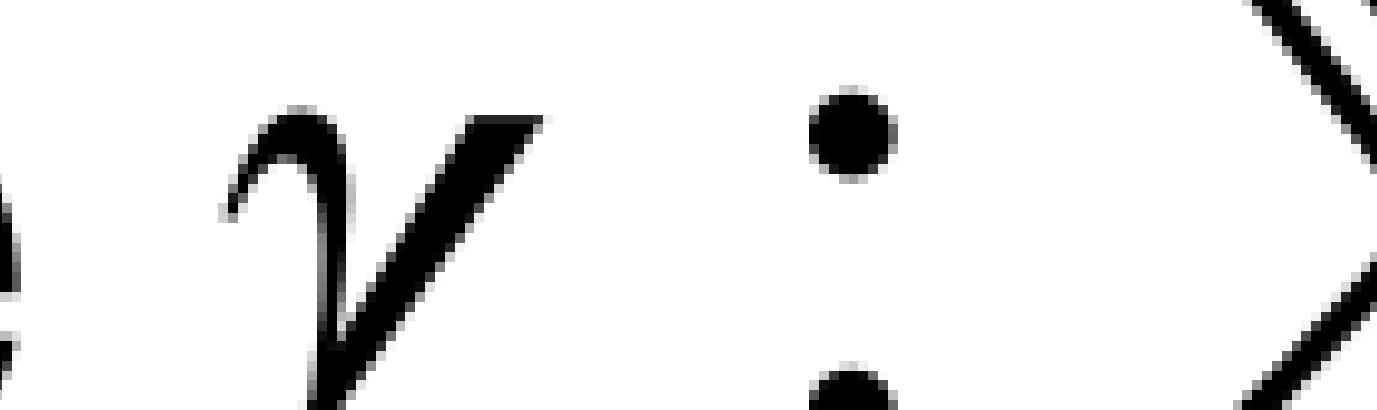


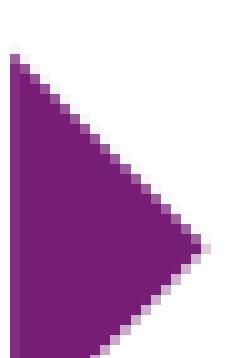
SCAMPING: DOG-FRIENDLY



- Given a probability distribution π we want to sample over some state space X

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

 Suppose we can evaluate y .    Efficiently

 Suppose ~~some~~ states have some space.

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

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

- ▶ Cannot evaluate the normalising constant Z

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

SAMPLING: DENSITIES

- ▶ Suppose \mathbb{X} is some statespace:
 - ▶ Discrete, \mathbb{R}^d , a manifold, image, a graph, tree, a molecule, etc
- ▶ Given a probability distribution π we want to sample over some stateapce \mathbb{X}

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

- ▶ Suppose we can evaluate $\gamma : \mathbb{X} \rightarrow \mathbb{R}$ efficiently
- ▶ Cannot evaluate the normalising constant Z

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

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

SAMPLING: POTENTIALS