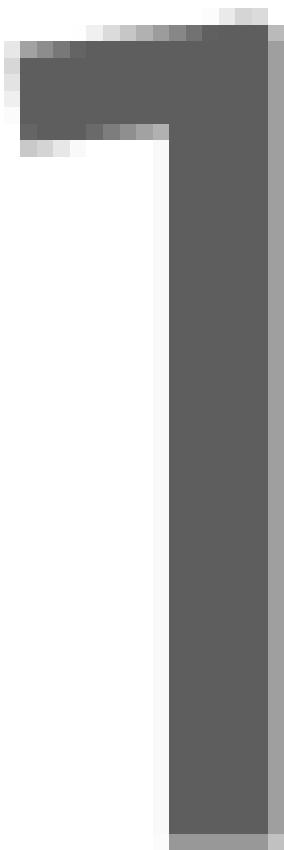
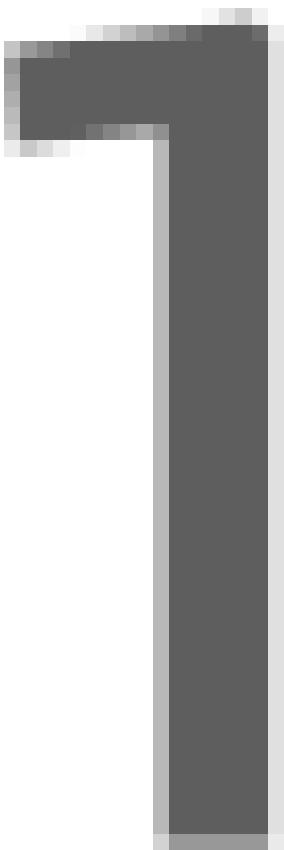




Siddhartha Mishra (MIT/Alfi) Summer School



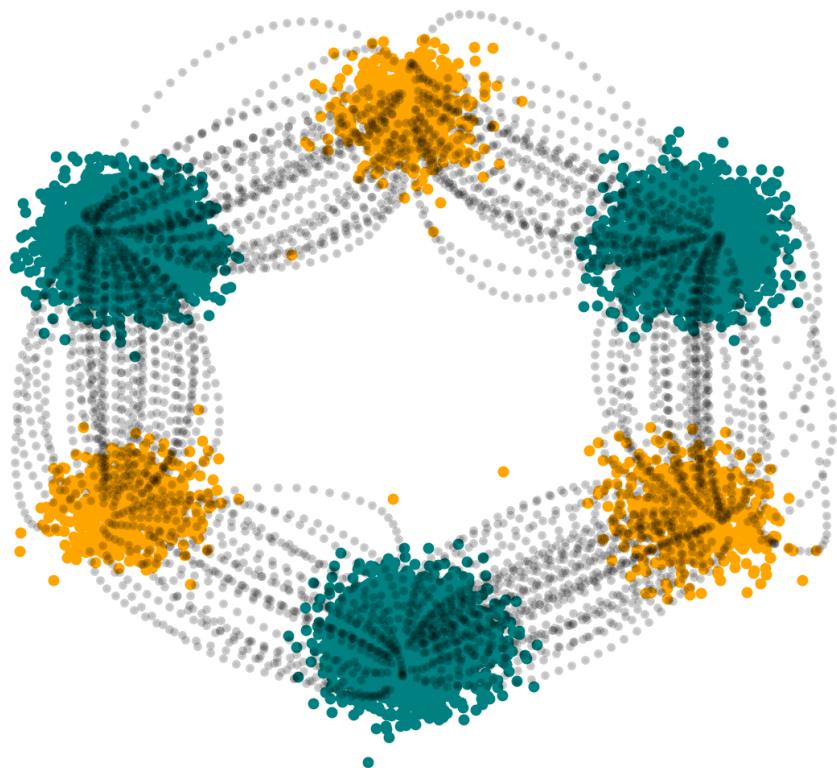




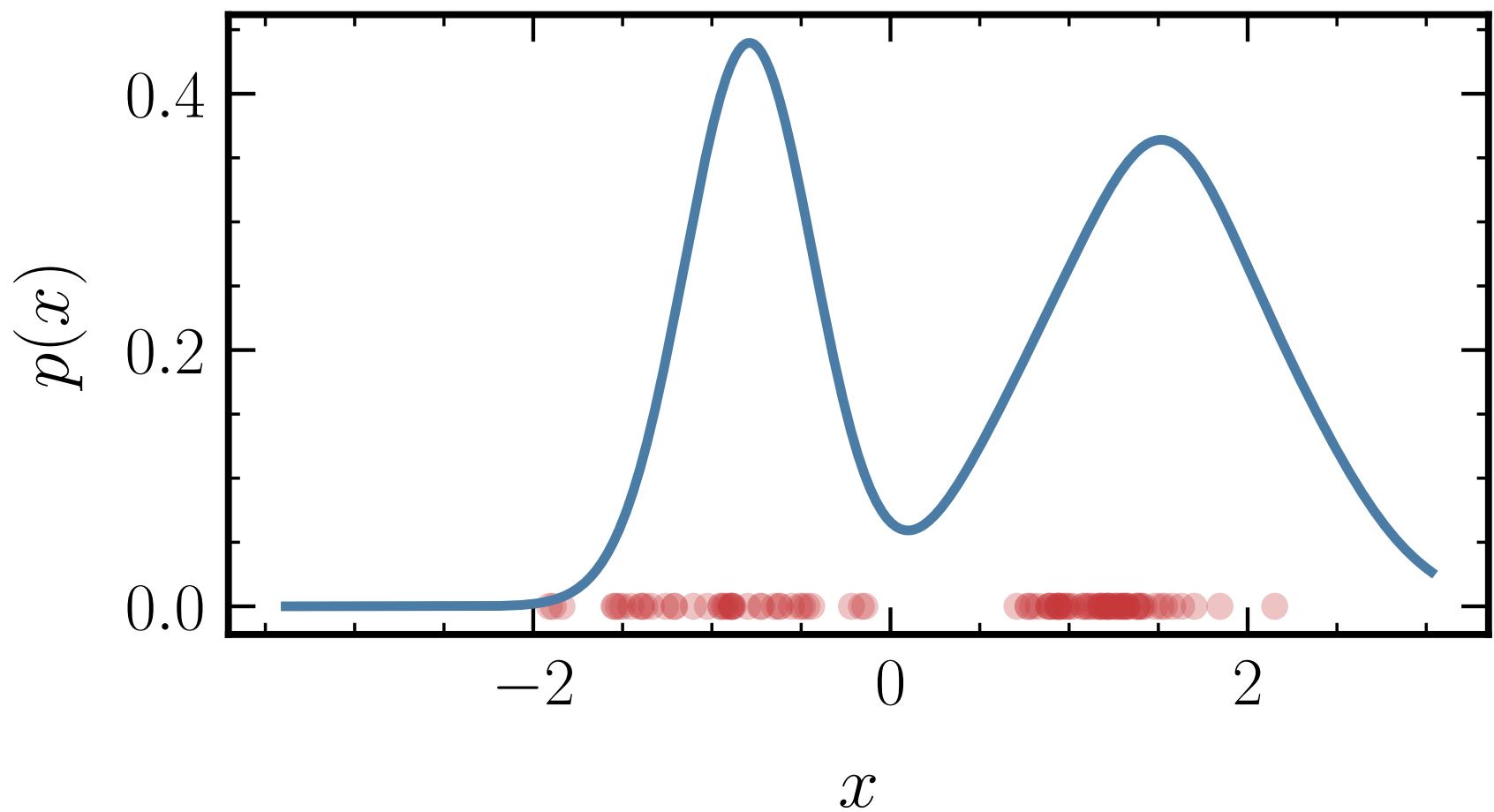
(Some) ways of training deep generative models

sovereign state

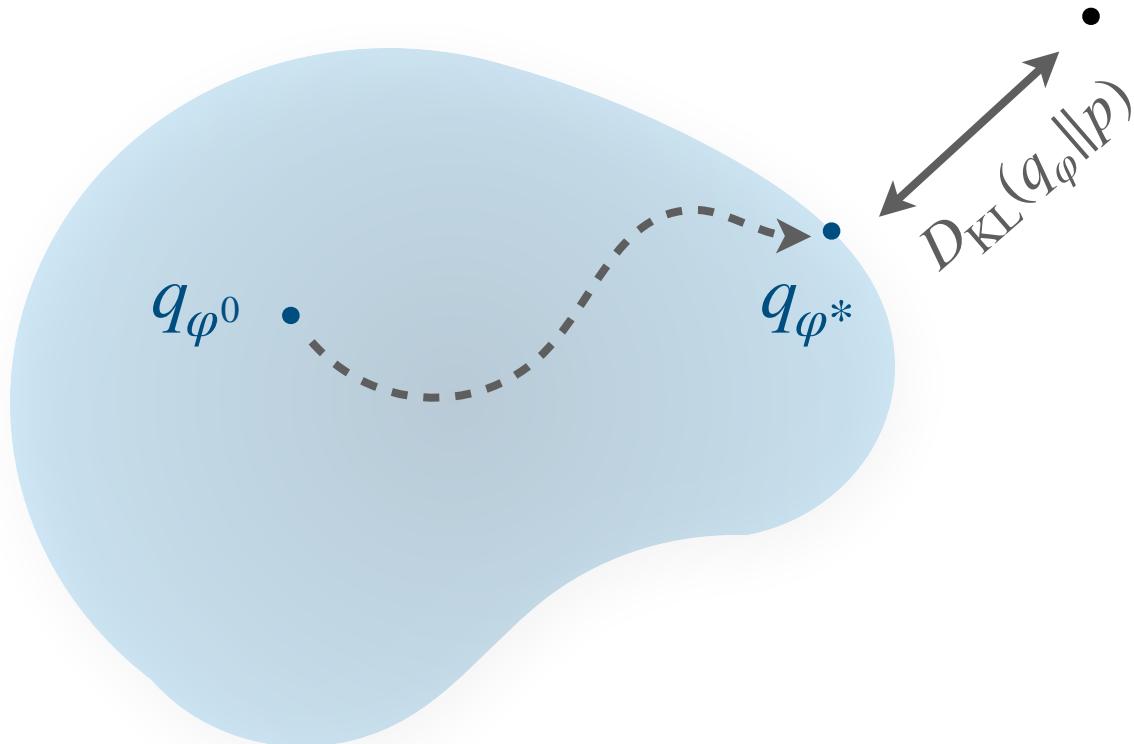
# Optimal transport

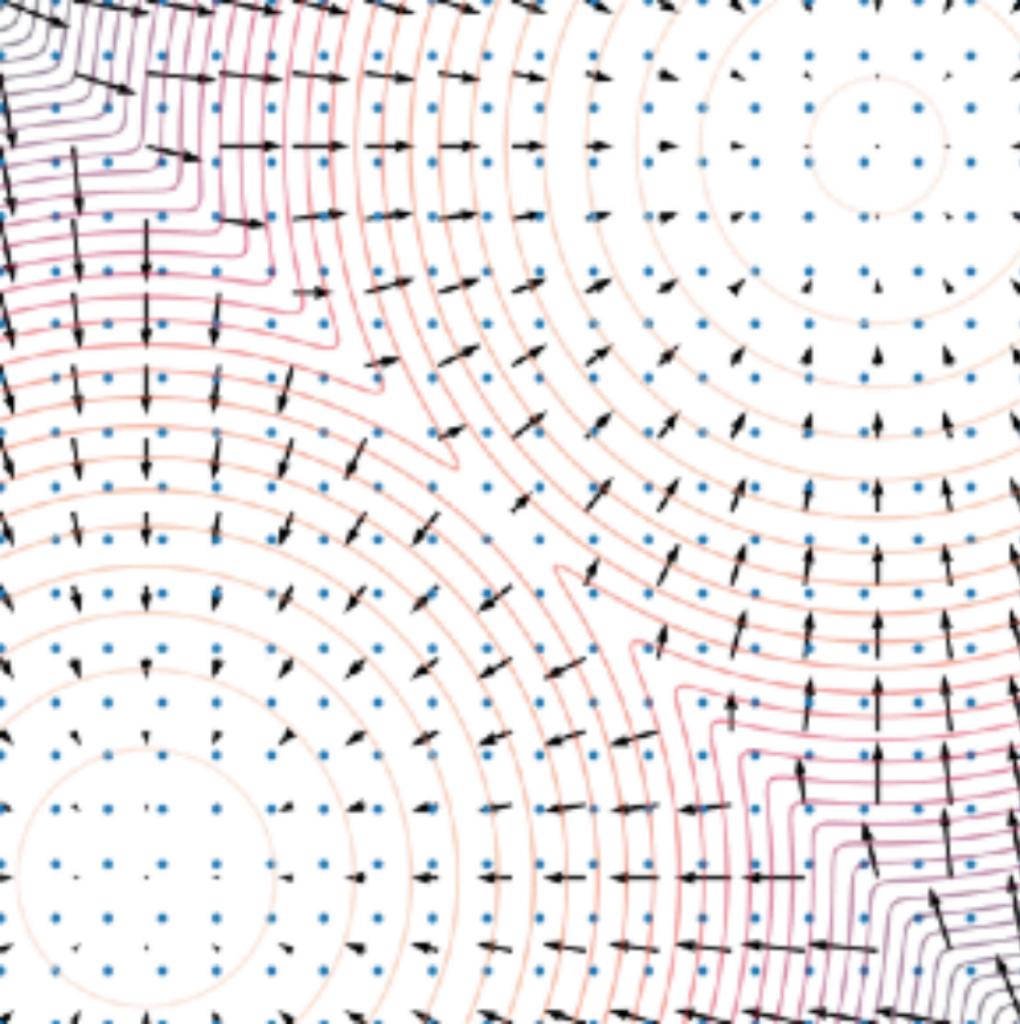


# Maximum-likelihood

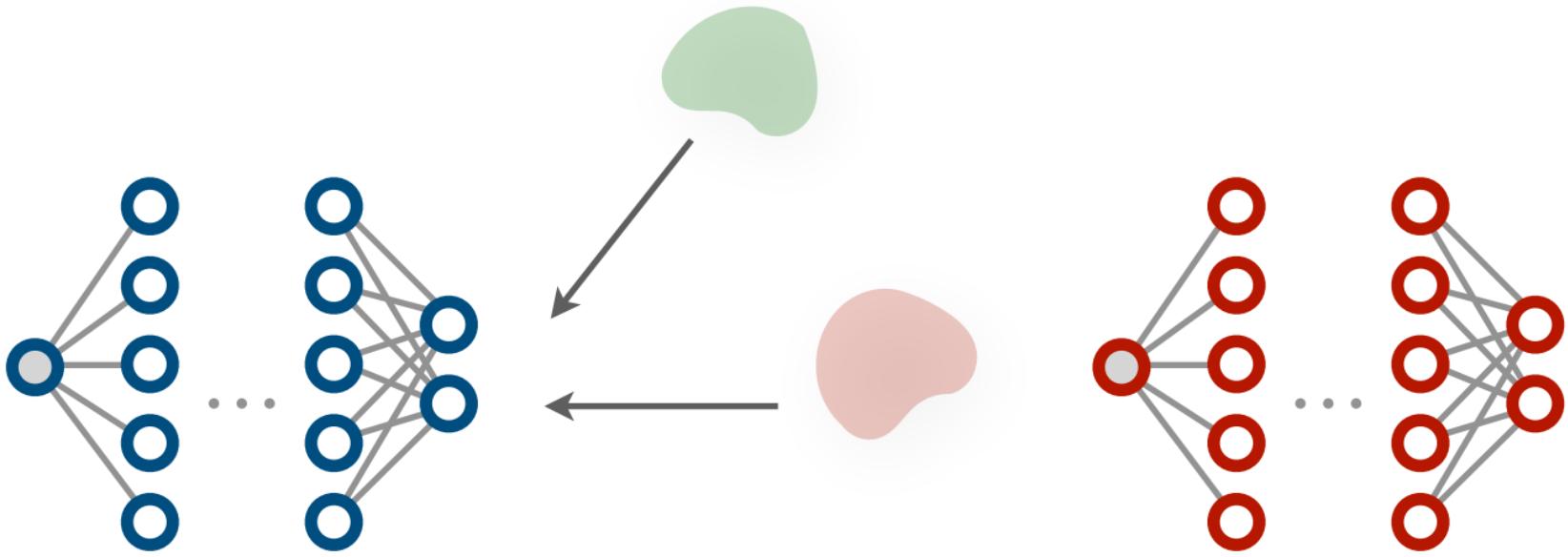


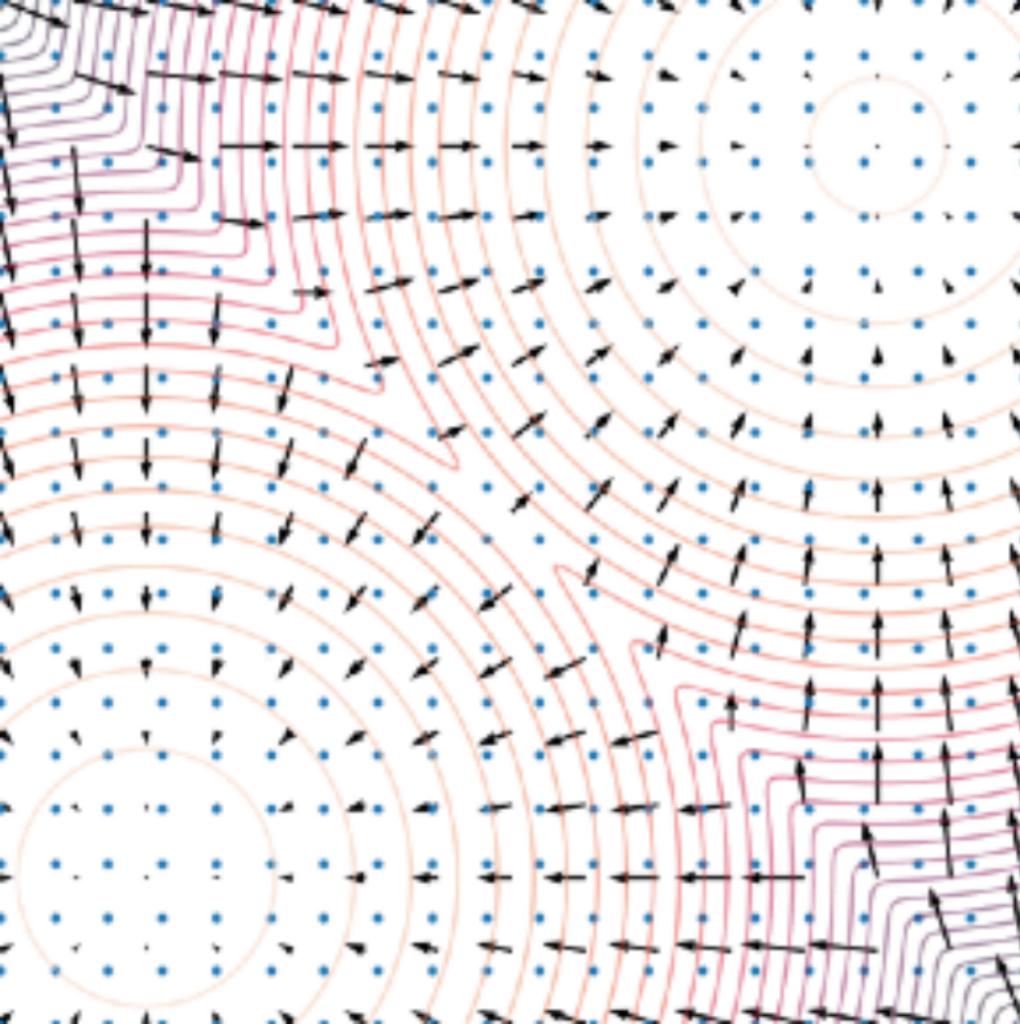
# Optimizing a bound on the likelihood

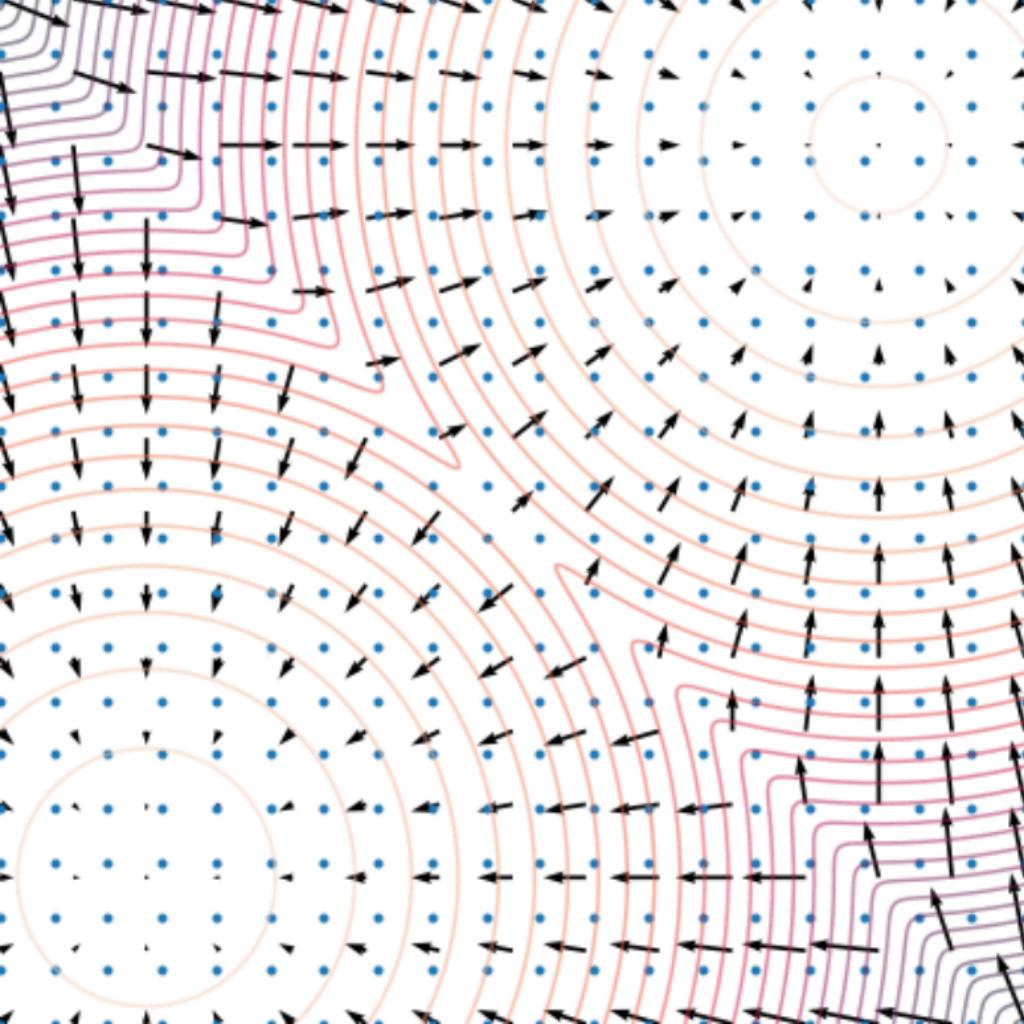




# Adversarial training

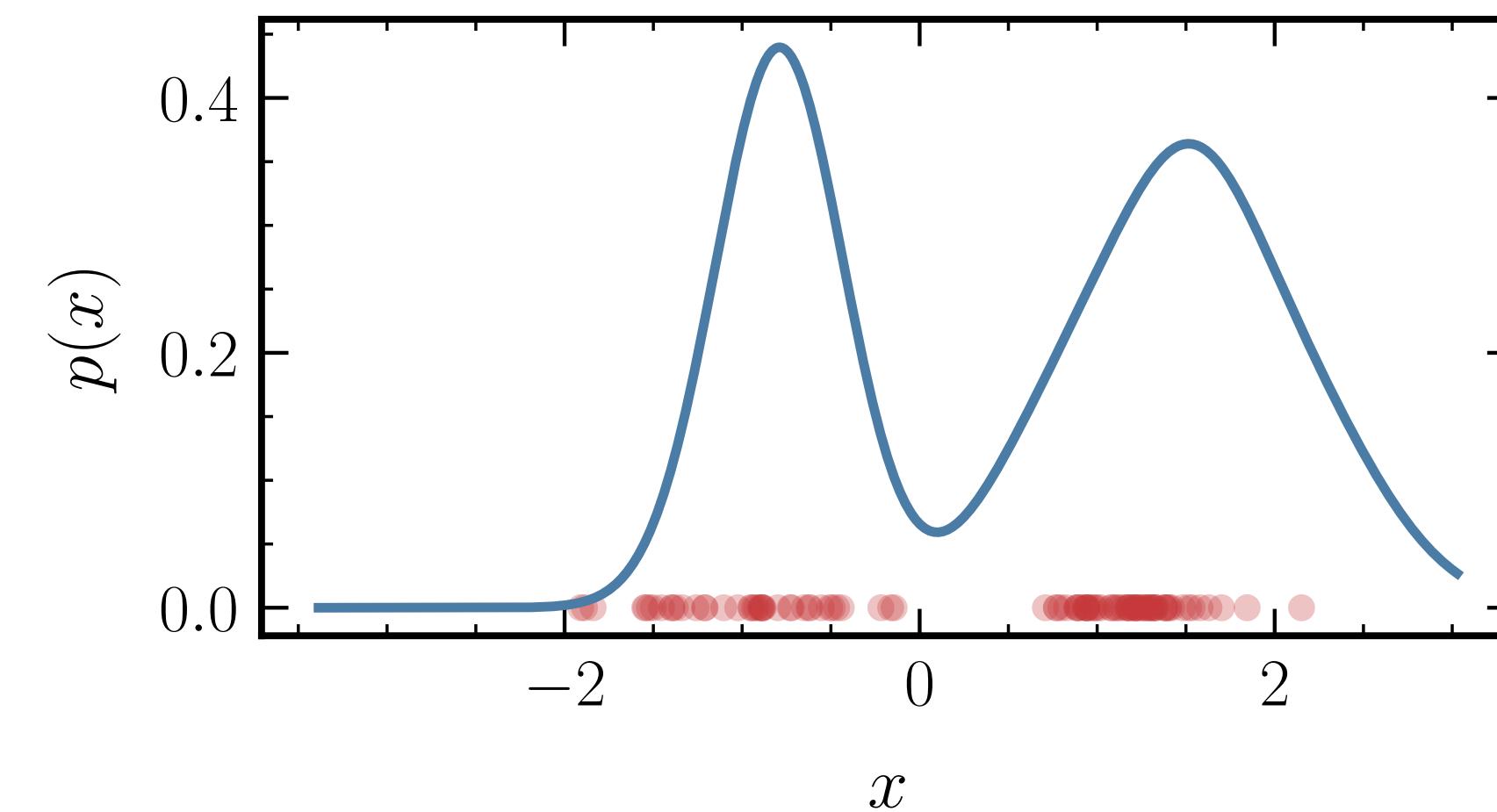




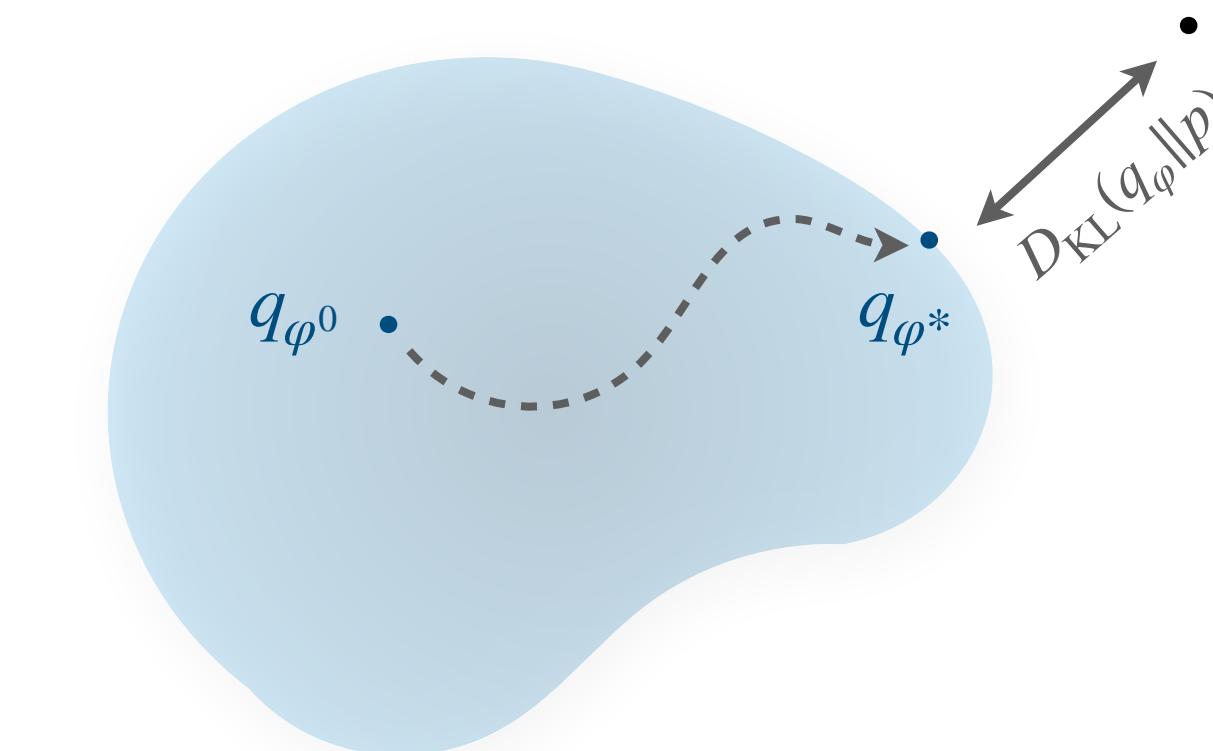


# (Some) Ways of training deep generative models

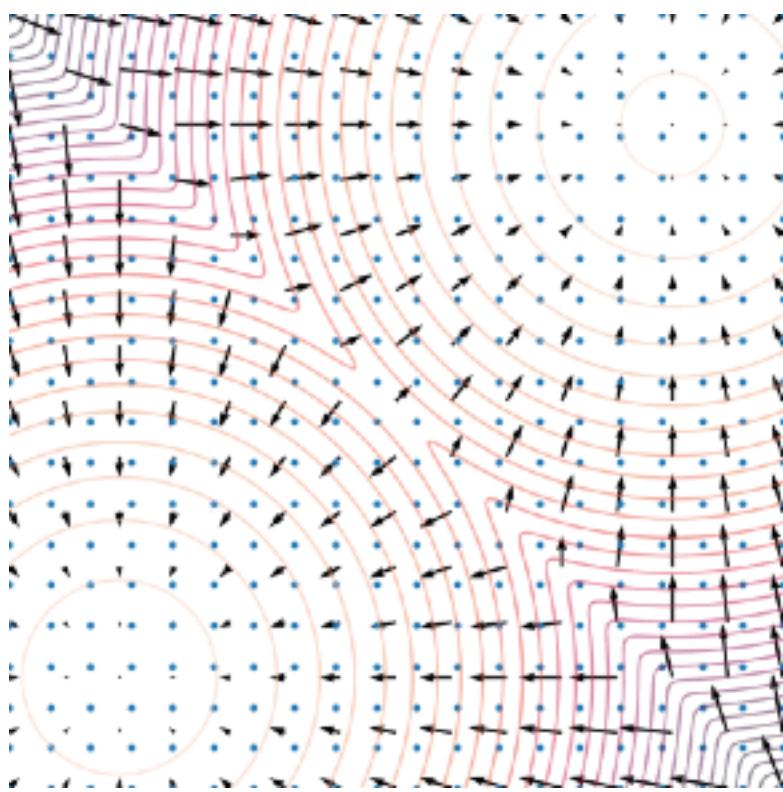
Maximum-likelihood



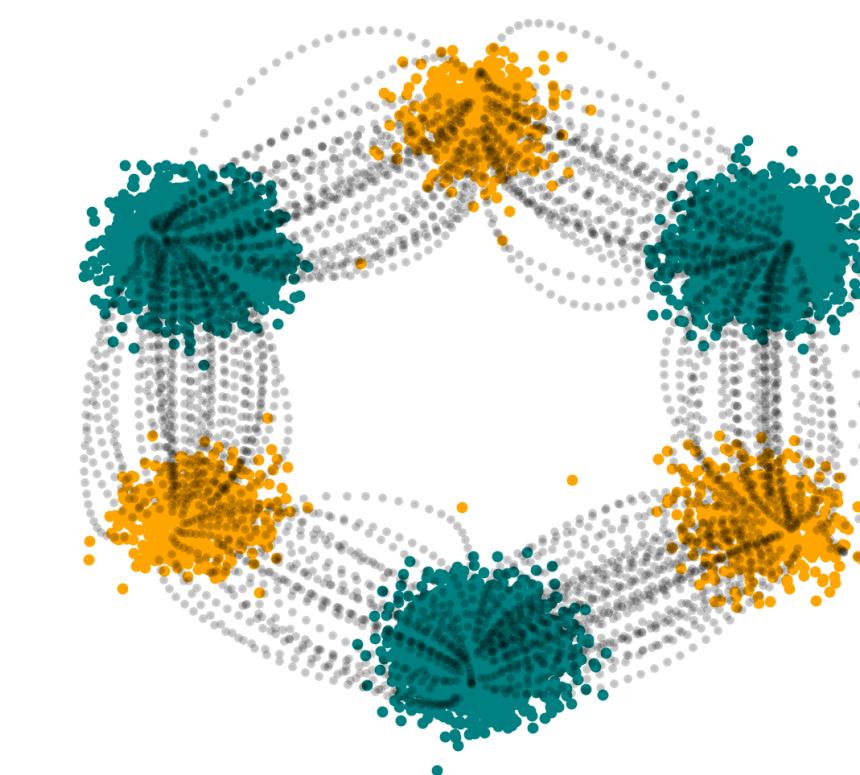
Optimizing a bound on the likelihood



Score-matching



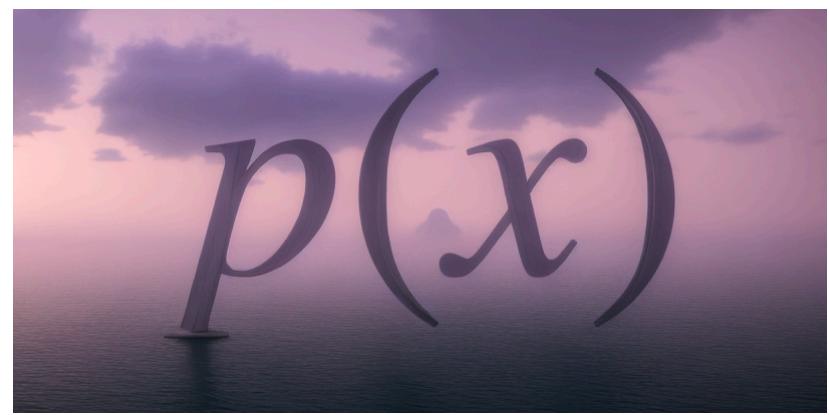
Optimal transport



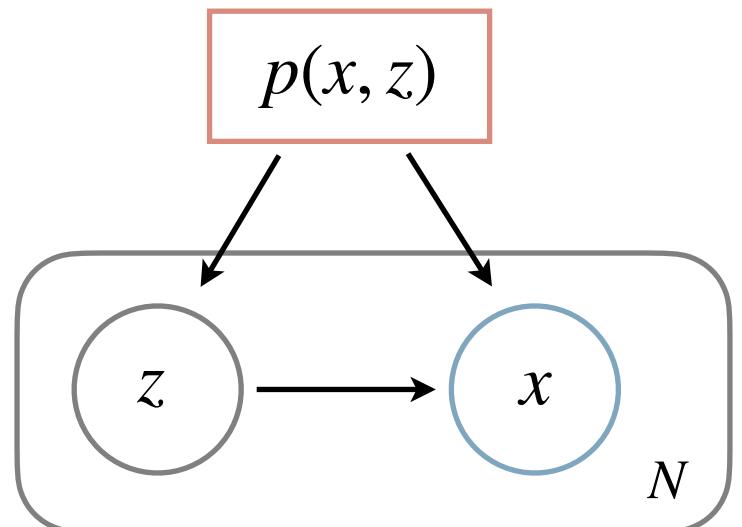
Adversarial training



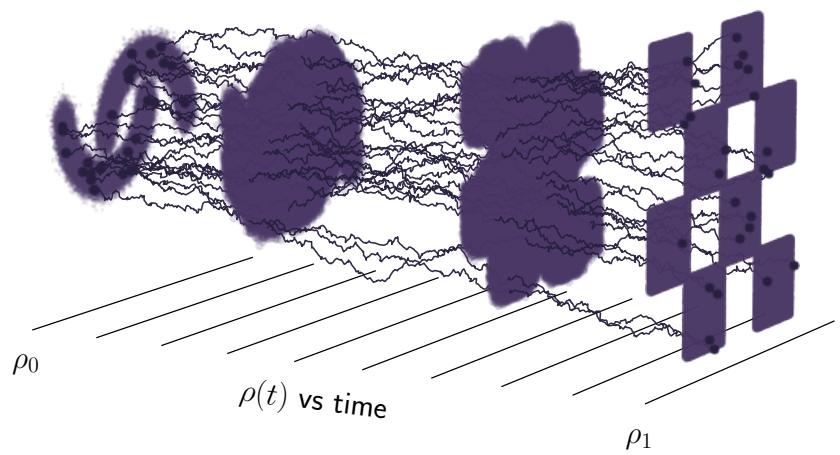
# Outline



**Why (deep) generative modeling?**  
*What is it, and what can it do for you?*



**Variational auto encoders**  
*Latent-variable modeling, and compression is all you need*



**Diffusion models**  
*Models based on iterative refinement*



**Normalizing flows (and some other models)**  
*Invertible transformations*