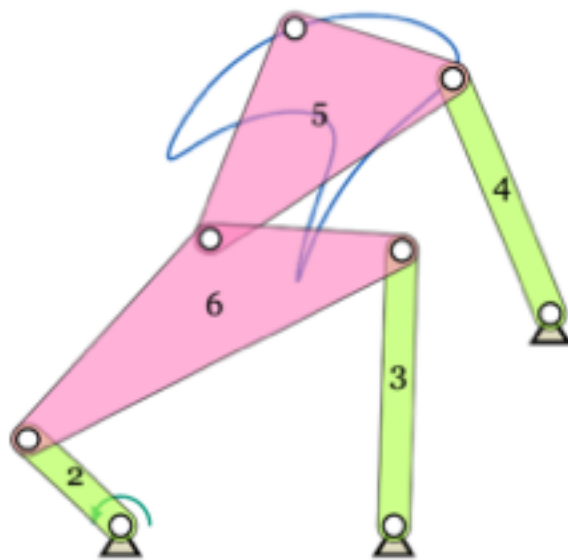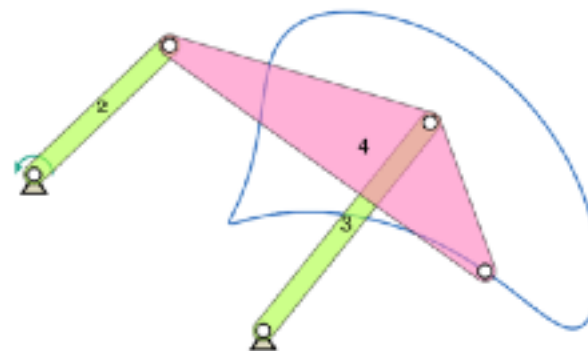# Representation Learning of Linkage Trajectories

- Learn Salient Features of Linkage Trajectories
- Given an unknown trajectory, recognize the potential linkage type.
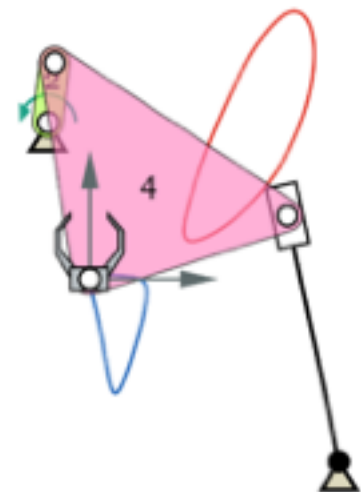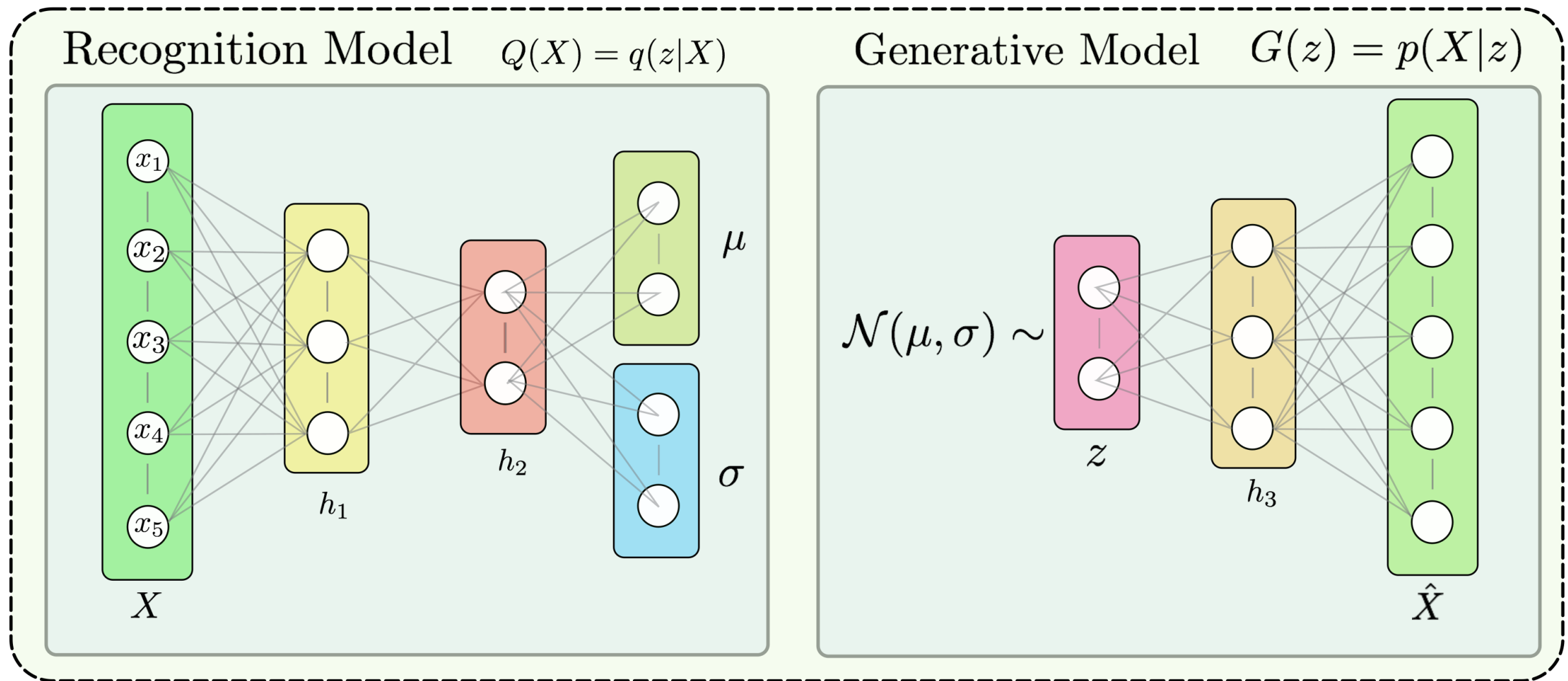
Six-Bar Linkage

Four-R Linkage

Slider Crank Linkage

Variational Auto Encoder

Recognition Model $Q(X) = q(z|X)$

Generative Model $G(z) = p(X|z)$

μ

σ

h_1

h_2

X

$\mathcal{N}(\mu, \sigma) \sim$

z

h_3

$\hat{X}$

Overserved Variable = X

- X can be Coupler Trajectories or Entire Linkage
- X is Generated by a Natural Process, involving an unobserved continuous hidden variable z