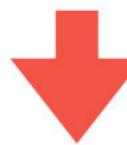## Encoder Training and $\hat{\sigma}_m^2$ Approximation

INPUT: Training dataset $\mathcal{D}_{train}$

Train encoder f_θ with $\mathcal{D}_{train}$

Approximate $\hat{\sigma}_m^2$ with $f_\theta(\mathcal{D}_{train})$

Brownian Bridge Score Computing

INPUT: Article X

Compute the latent: $\mathbf{s} = f_\theta(X)$

Compute the Score: $B(\mathbf{s}|\hat{\sigma}_m^2)$