

Proposed Approach – Variational Inference

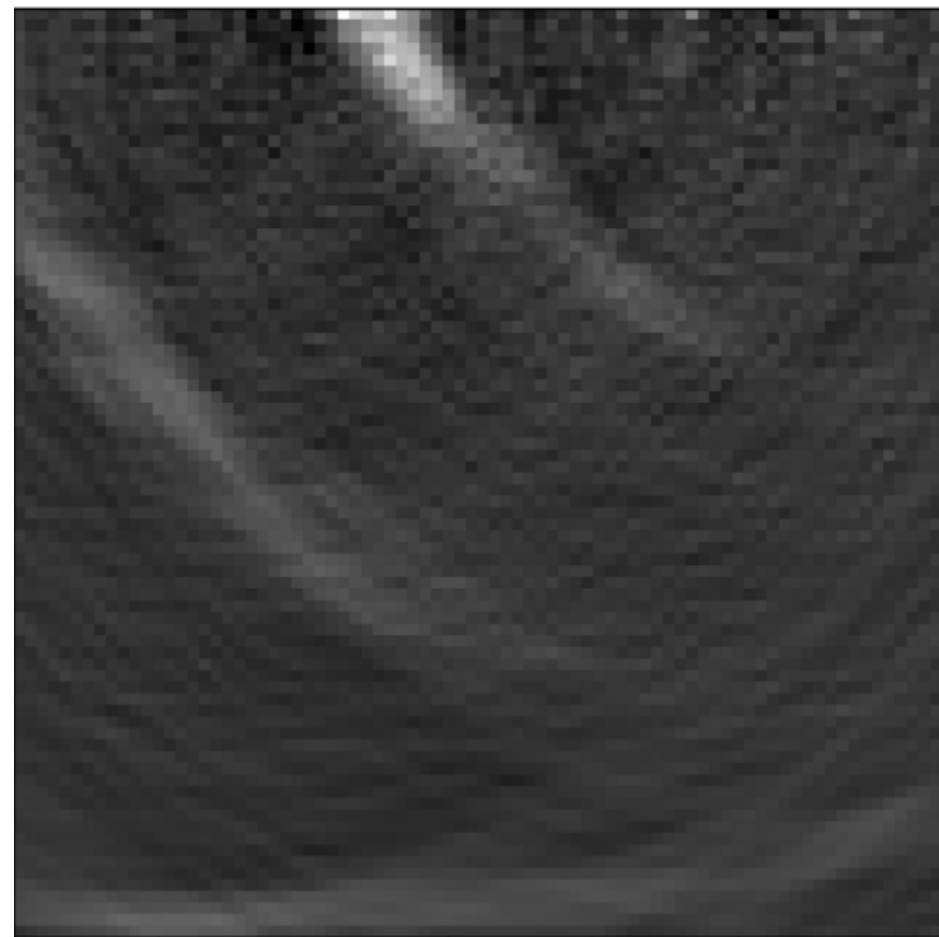
Pose inverse problem in Bayesian formulation where the (conditional) posterior distribution encodes all sources of uncertainty

$$p(\mathbf{x} | \mathbf{y})$$

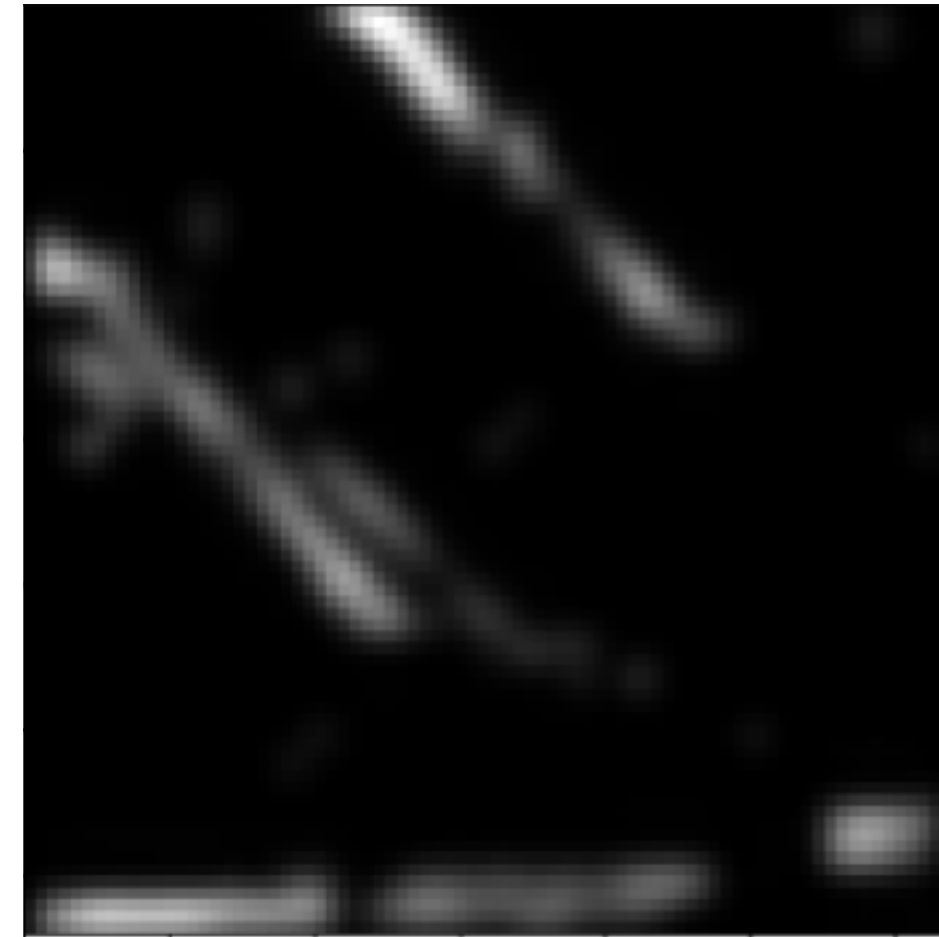
We want a method of **Variational Inference** to approximate this distribution

$$q_{\theta}(\mathbf{x} | \mathbf{y}) \approx p(\mathbf{x} | \mathbf{y})$$

Training samples & operator \rightarrow samples from joint distribution $\mathbf{y}, \mathbf{x} \sim \pi_{y,x}(\mathbf{y}, \mathbf{x})$



$$\mathbf{y} = \mathbf{p}_{adj} = A^{\top} \mathbf{d}$$



$$\mathbf{x} = \mathbf{p}$$

Conditional NFs – Conditional Sampling

We can sample directly from the posterior

