MAP reconstruction = MRI Prior $g(\boldsymbol{x})$ + k-space model

$$\hat{\boldsymbol{x}}_{\mathrm{MAP}}(\boldsymbol{y}) = \arg\max_{\boldsymbol{x}} \ \log p(\boldsymbol{x}; \mathtt{NET}(\boldsymbol{x}, \hat{\Theta})) + \log f(\boldsymbol{y} \mid \boldsymbol{x})$$

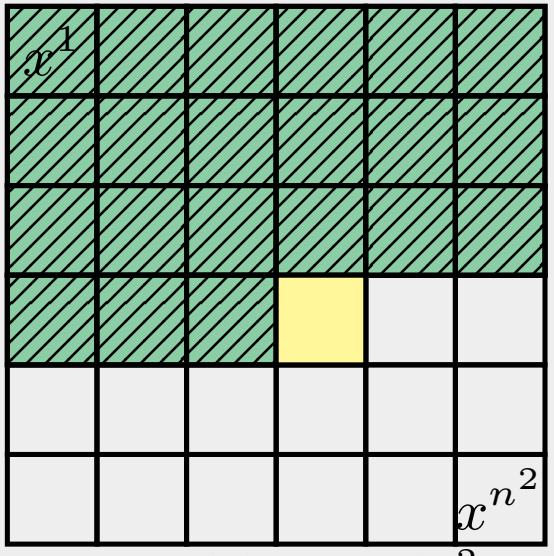
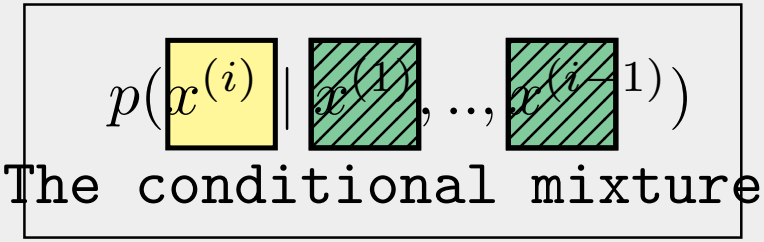
data fidelity

$\hat{\Theta}$ obtained by training

$$\boldsymbol{y} = \mathbf{A}\boldsymbol{x} + \boldsymbol{\varepsilon}$$

NET *loss*: $p(\boldsymbol{x}; \boldsymbol{\pi}, \boldsymbol{\mu}, \boldsymbol{s}, \boldsymbol{\alpha}) = p(x^{(1)}) \prod_{i=2}^{n^2} p(x^{(i)} \mid x^{(1)}, .., x^{(i-1)})$

input *output*



$$\boldsymbol{x} = (x^{(1)}, ..., x^{(n^2)})$$