

Regression $f_1(\mathbf{x})$ $p(\mathbf{y}_1|\mathbf{W},\mathbf{x})$

Intrinsic uncertainty
$$\sigma_1^2(\mathbf{x})$$

Intrinsic uncertainty
$$\sigma_2^2(\mathbf{x})$$

$$p(\mathbf{y}_2 = c|\mathbf{W}, \mathbf{x})$$

$$\mathcal{L}\left(\mathbf{W}, \sigma_1^2(\mathbf{x}), \sigma_2^2(\mathbf{x})
ight)$$

Segmentation
$$f_2(\mathbf{x})$$