

Regression  $f_1(\mathbf{x})$  Intrinsic uncertainty  $\sigma_1(\mathbf{x})$ 

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

Segmentation 
$$f_2(\mathbf{x})$$
  $p(\mathbf{y}_2 = c | \mathbf{W}, \mathbf{x})$ 

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

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