

Repeated by Resampling

$\lambda_1, \lambda_2, \lambda_3, \dots$

$\mathcal{D}_{\text{test}}$

$\mathcal{D}_{\text{train}}$

$\mathcal{I}_\lambda$

$\hat{f}/\hat{\theta}$



$\min_{\theta} \mathcal{R}_{\text{emp}}(\theta)$



$\rho(\mathbf{y}_{J_{\text{test}}}, \mathbf{F}_{J_{\text{test}}})$

Input

Data  $\mathcal{D}$ , Inducer  $\mathcal{I}$ , metric  $\rho$ ,  
splits  $\mathcal{J}$ , search space  $\tilde{\Lambda}$

Update Optimizer

HPO  
Loop

Propose new HPC  
 $\lambda^+$

Evaluate by Resampling  
 $c(\lambda^+)$

Return  
HPC  $\hat{\Lambda}$