$$\hat{\beta} = \underset{\beta}{\operatorname{argmin}} \left\{ -\mathrm{LogLikelihood}\left(Y; X, \beta\right) + \mathrm{Reg}\left(\lambda, \beta, Y, X\right) \right\}$$

$$\text{where } \mathrm{Reg}\left(\cdot\right) = \lambda \sum_{i=1}^{N} \left[P\left(Y \mid X, \beta\right) - P_{\mathrm{Random\_Forest}(Y|X)} \right]^2$$