

# Using a Predictive Function to Build an Ensemble of Neural Network Ensembles.

## The Problem

NES problem is formulated as:

$$\begin{aligned} \min_S \mathcal{L}_{val} \left( \frac{1}{|S|} \sum_{\alpha \in S} f_{\alpha}(x, \omega^*(\alpha)) \right) \\ \text{s.t. } \forall \alpha \in S : \omega^*(\alpha) = \arg \min_{\omega(\alpha)} \mathcal{L}_{train}(f_{\alpha}(x, \omega(\alpha))) \end{aligned} \quad (1)$$

## Predictive function

A function is proposed to estimate model similarity for effective combination.

