

METHOD AND APPARATUS FOR SEARCHING FOR NEURAL NETWORK ENSEMBLE MODEL, AND ELECTRONIC DEVICE

ABSTRACT

Disclosed is a method for searching for a neural network architecture ensemble model. The method includes:
5 obtaining a dataset, where the dataset includes a sample and an annotation in a classification task; performing search
by using a distributional neural network architecture search algorithm, including: determining a hyperparameter of a
neural network architecture distribution; sampling a valid (valid) neural network architecture from the architecture
distribution defined by the hyperparameter; training and evaluating the neural network architecture on the dataset, to
obtain a performance indicator; determining, based on the performance indicator, neural network architecture
10 distributions that share the hyperparameter, to obtain a candidate pool of base learners, where the base learner is a
neural network architecture that meets an architecture distribution requirement; and determining a surrogate model,
where the surrogate model is used to predict test performance of an unevaluated neural network architecture; and
predicting test performance of the base learner in the candidate pool by using the surrogate model, and determining
that k diverse (diverse) base learners that meet a task scenario requirement form an ensemble model, where a size
15 of the ensemble model is k .

Figure 5