

METHOD, APPARATUS, AND SYSTEM FOR TRAINING NEURAL NETWORK MODEL

ABSTRACT

Embodiments of this specification provide a method and an apparatus for training a neural network model. The neural network model includes first neural network submodels located at first member devices. Each first member device uses private data to perform model prediction to obtain predicted label data and determines model update information of the first neural network submodel, and provides the model update information of the first neural network submodel and local sample distribution information to a second member device. The second member device performs neural network model reconstruction according to the model update information of the first neural network submodel of each first member device, determines an overall sample probability distribution according to the local sample distribution information of each first member device, and allocates the reconstructed neural network model and the overall sample probability distribution to each first member device. Each first member device updates the first neural network submodel according to a local sample probability distribution, the reconstructed neural network model, and the overall sample probability distribution.

FIG. 5