

CLAIMS

1. A data processing method, comprising:

transmitting, by a central server, an initial baseline model to an edge server;

training, by the edge server, the initial baseline model with scenario data from the edge server to obtain a target baseline model, and determining whether to deploy the target baseline model or not;

transmitting, by the edge server, the target baseline model to the central server if it is determined that the target baseline model is not deployed; and

performing, by the central server, a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model, training the fusion baseline model to obtain a trained baseline model, determining the trained baseline model as an initial baseline model, and returning to an operation of transmitting, by the central server, the initial baseline model to the edge server.

2. The method according to claim 1, wherein transmitting, by the central server, the initial baseline model to the edge server, comprises:

transmitting, by the central server, the initial baseline model to a first relay device;

performing, by the first relay device, a first conversion operation on the initial baseline model to obtain a first low-dimensional baseline mode, and transmitting the first low-dimensional baseline model to a second relay device; and

performing, by the second relay device, a second conversion operation on the first low-dimensional baseline model to obtain the initial baseline model, and transmitting the initial baseline model to the edge server.

3. The method according to claim 1, wherein transmitting, by the edge server, the target baseline model to the central server, comprises:

transmitting, by the edge server, the target baseline model to a second relay device;

performing, by the second relay device, a first conversion operation on the target baseline model to obtain a second low-dimensional baseline model, and transmitting the second low-dimensional baseline model to a first relay device; and

performing, by the first relay device, a second conversion operation on the second low-dimensional baseline model to obtain the target baseline model, and transmitting the target baseline model to the central server.

4. The method according to claim 2 or 3, wherein

the first conversion operation is an encryption operation, and the second conversion operation is a decryption operation; or

the first conversion operation is a compression operation, and the second conversion operation is a decompression operation; or

the first conversion operation is an encryption operation and a compression operation, and the second conversion operation is a decryption operation and a decompression operation.

5. The method according to claim 1, wherein the fusion operation comprises one of a weighting operation, an averaging operation, an operation of taking a maximum value, and an operation of taking a minimum value.

6. The method according to claim 5, wherein in the case that the fusion operation is the weighting operation, a weight of the initial baseline model is different from that of the target baseline model.

7. The method according to claim 1, wherein after determining whether to deploy the target baseline model or not, the method further comprises:

processing, by the edge server, application data with the target baseline model if it is determined that the target baseline model is deployed.

8. The method according to claim 1, wherein the initial baseline model is trained by the central server with sample data and label information of the sample data.

9. A data processing method, applied to an edge server, the method comprising:

acquiring an initial baseline model from a central server;

training the initial baseline model with scenario data from the edge server to obtain a target baseline model, and determining whether to deploy the target baseline model or not; and

if it is determined that the target baseline model is not deployed, transmitting the target baseline model to the central server, such that the central server performs a fusion operation

on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model, and reacquires an initial baseline model based on the fusion baseline model, and returning to an operation of acquiring the initial baseline model from the central server.

10. A data processing method, applied to a central server, the method comprising:

- transmitting an initial baseline model to an edge server, such that the edge server trains the initial baseline model with scenario data from the edge server to obtain a target baseline model;

- acquiring the target baseline model from the edge server;

- performing a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model; and

- training the fusion baseline model to obtain a trained baseline model, determining the trained baseline model as an initial baseline model, and returning to an operation of transmitting the initial baseline model to the edge server.

11. A data processing apparatus, applied to an edge server, the apparatus comprising:

- an acquiring module, configured to acquire an initial baseline model from a central server;

- a training module, configured to train the initial baseline model with scenario data from the edge server to obtain a target baseline model, and determine whether to deploy the target baseline model or not; and

- a transmitting module, configured to transmit the target baseline model to the central server if it is determined that the target baseline model is not deployed, such that the central server performs a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model, and reacquires an initial baseline model based on the fusion baseline model.

12. A data processing apparatus, applied to a central server, the apparatus comprising:

- a transmitting module, configured to transmit an initial baseline model to an edge server, such that the edge server trains the initial baseline model with scenario data from the edge server to obtain a target baseline model;

an acquiring module, configured to acquire the target baseline model from the edge server; and

a generating module, configured to perform a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model, train the fusion baseline model to obtain a trained baseline model, and determine the trained baseline model as an initial baseline model.

13. An edge server, comprising a processor and a machine-readable storage medium storing machine-executable instructions executable by the processor,

wherein the processor is configured to execute the machine-executable instructions to implement operations comprising:

acquiring an initial baseline model from a central server;

training the initial baseline model with scenario data from the edge server to obtain a target baseline model, and determining whether to deploy the target baseline model or not; and

transmitting the target baseline model to the central server if it is determined that the target baseline model is not deployed, such that the central server performs a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model, and reacquires an initial baseline model based on the fusion baseline model, and returning to the operation of acquiring the initial baseline model from the central server.

14. A central server, comprising a processor and a machine-readable storage medium storing machine-executable instructions executable by the processor,

wherein the processor is configured to execute the machine-executable instructions to implement operations comprising:

transmitting an initial baseline model to an edge server, such that the edge server trains the initial baseline model with scenario data from the edge server to obtain a target baseline model;

acquiring the target baseline model from the edge server;

performing a fusion operation on the target baseline model of at least one of the edge server and the initial baseline model to obtain a fusion baseline model; and

training the fusion baseline model to obtain a trained baseline model, determining the trained baseline model as an initial baseline model, and returning to the operation of transmitting the initial baseline model to the edge server.