CLAIMS

What is claimed is:

1. A data processing method, applied to a blockchain node, and comprising:

receiving a data processing request sent by a first user, wherein the data processing request comprises first original data to be processed;

invoking a first smart contract deployed in a blockchain network, and determining data type information of the first original data based on the first smart contract;

selecting a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts; and

extracting a feature value of the first original data based on the target second smart contract, wherein the second smart contract is provided with an extraction rule for a feature value of first original data of a corresponding data type;

matching historical data saved in the blockchain network based on the feature value so as to determine whether there is target historical data whose similarity with the first original data satisfies a predetermined condition in the historical data; and

performing corresponding processing based on matching result information of the matching processing.

2. The method according to claim 1, wherein the selecting a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts comprises:

obtaining associated target contract identification information from a predetermined association relationship between data type information and contract identification information based on the data type information; and

determining a second smart contract corresponding to the target contract identification information as a target second smart contract matched with the data type information.

3. The method according to claim 1, wherein the extracting a feature value of the first original data based on the first smart contract comprises:

determining data type information of the first original data based on the first smart contract;

selecting a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts, wherein the second smart contract is provided with an extraction rule for a feature value of first original data of a corresponding data type; and

extracting a feature value of the first original data based on a target extraction rule provided by the target second smart contract.

4. The method according to claim 1 or 3, wherein the determining data type information of the first original data based on the first smart contract comprises:

identifying, based on the first smart contract, the first original data by using a predetermined type identification method to obtain data type information of the first original data; or,

obtaining data type information of the first original data from the data processing request based on the first smart contract.

5. The method according to claim 1, wherein the matching historical data saved in the blockchain network based on the feature value so as to determine whether there is target historical data whose similarity with the first original data satisfies a predetermined condition in the historical data comprises:

performing fuzzy search processing on the feature value of the first original data and a feature value of historical data saved in the blockchain network so as to obtain candidate historical data satisfying a first predetermined condition from the historical data;

calculating a similarity between the first original data and each piece of the candidate historical data based on a predetermined similarity calculation method; and

determining whether there is target historical data whose similarity with the first original data satisfies a second predetermined condition in the historical data based on the calculated similarity.

6. The method according to claim 5, wherein the performing fuzzy search processing on the feature value of the first original data and a feature value of historical data saved in the blockchain network so as to obtain candidate historical data satisfying a first predetermined condition from the historical data comprises:

indexing the feature value of the first original data and the feature value corresponding to the historical data saved in the blockchain network based on a predetermined indexing method to obtain a target feature value satisfying a first predetermined condition; and

determining historical data corresponding to the target feature value as the candidate historical data.

7. The method according to claim 1, wherein the data processing request comprises a data preservation request; and

after the extracting a feature value of the first original data based on the first smart contract, the method further comprises:

associatively saving the feature value and the first original data in the blockchain network, and sending preservation success information to the first user.

8. The method according to claim 7, wherein the performing corresponding processing based on matching result information of the matching processing comprises:

if an existence of the target historical data is determined based on the matching result information of the matching processing, sending first prompt information indicating the existence of similar data to the first user based on related information of the target historical data, and sending second prompt information indicating the existence of similar data to a second user corresponding to the target historical data based on related information of the first original data.

9. The method according to claim 8, after the sending first prompt information indicating the existence of similar data to the first user based on related information of the target historical data, further comprising:

receiving the data preservation request sent by the first user, wherein the data preservation request comprises second original data to be preserved obtained by updating the first original data based on the first prompt information; and

preserving the second original data.

10. The method according to claim 1, wherein the data processing request comprises a retrieval request; and

the performing corresponding processing based on matching result information of the matching processing comprises:

if an existence of the target historical data is determined based on the matching result information of the matching processing, sending retrieval result information to the first user based on related information of the target historical data.

11. A data processing apparatus, applied to a blockchain node, and comprising:

a receiving module, configured to receive a data processing request sent by a first user, wherein the data processing request comprises first original data to be processed;

an extraction module, configured to invoke a first smart contract deployed in a blockchain network and determine data type information of the first original data based on the first smart contract, select a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts, and extract a feature value of the first original data based on the target second smart contract, wherein the second smart contract is provided with an extraction rule for a feature value of first original data of a corresponding data type;

a matching module, configured to match historical data saved in the blockchain network based on the feature value so as to determine whether there is target historical data whose similarity with the first original data satisfies a predetermined condition in the historical data; and

a processing module, configured to perform corresponding processing based on matching result information of the matching processing.

12. The apparatus according to claim 11,

wherein the matching module is configured to: perform fuzzy search processing on the feature value of the first original data and a feature value of historical data saved in the blockchain network so as to obtain candidate historical data satisfying a first predetermined condition from the historical data;

calculate a similarity between the first original data and each piece of the candidate historical data based on a predetermined similarity calculation method; and

determine whether there is target historical data whose similarity with the first original data satisfies a second predetermined condition in the historical data based on the calculated similarity.

13. The apparatus according to claim 11, wherein the data processing request comprises a data preservation request, and the apparatus further comprises a storage module,

wherein the storage module is configured to: associatively save the feature value and the first original data in the blockchain network and send preservation success information to the first user after the extraction module extracts a feature value of the first original data based on the first smart contract.

14. The apparatus according to claim 11, wherein the data processing request comprises a retrieval request; and

the processing module is configured to: if an existence of the target historical data is determined based on the matching result information of the matching processing,

send retrieval result information to the first user based on related information of the target historical data.

15. A data processing device, comprising:

a processor; and

a memory configured to store computer-executable instructions, wherein the computer-executable instructions, when being executed, enable the processor to:

receive a data processing request sent by a first user, wherein the data processing request comprises first original data to be processed;

invoke a first smart contract deployed in a blockchain network, and determine data type information of the first original data based on the first smart contract;

select a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts; and

extract a feature value of the first original data based on the target second smart contract, wherein the second smart contract is provided with an extraction rule for a feature value of first original data of a corresponding data type;

match historical data saved in the blockchain network based on the feature value so as to determine whether there is target historical data whose similarity with the first original data satisfies a predetermined condition in the historical data; and

perform corresponding processing based on matching result information of the matching processing.

16. A storage medium, configured to store computer-executable instructions, wherein the computer-executable instructions implement the following procedure when being executed by a processor:

receiving a data processing request sent by a first user, wherein the data processing request comprises first original data to be processed;

invoking a first smart contract deployed in a blockchain network, and determining data type information of the first original data based on the first smart contract;

selecting a target second smart contract matched with the data type information from a plurality of pre-deployed second smart contracts, and

extracting a feature value of the first original data based on the target second smart contract, wherein the second smart contract is provided with an extraction rule for a feature value of first original data of a corresponding data type;

matching historical data saved in the blockchain network based on the feature value so as to determine whether there is target historical data whose similarity with the first original data satisfies a predetermined condition in the historical data; and

performing corresponding processing based on matching result information of the matching processing.