CLAIMS

1. A method for warehouse storage space planning wherein the method is performed in a device comprising at least a processor and a memory containing instructions executed by the processor, the method comprising the following steps:

obtaining warehouse goods change information of a predetermined time period and current storage space utilization information of a warehouse, wherein the predetermined time period is a future time period;

extracting a plurality of goods identifiers for a quantity of goods to be stored within the predetermined time period from the warehouse goods change information of the predetermined time period;

determining a storage attribute parameter of the quantity of goods to be stored within the predetermined time period based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period by:

querying a network or a database for goods parameters of the quantity of goods based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period; and

inputting the goods parameters into a storage attribute parameter calculation model to determine the storage attribute parameter of the quantity of goods; and

determining a preset storage space in the warehouse for the quantity of goods to be stored within the predetermined time period based on the storage attribute parameter of the quantity of goods to be stored within the predetermined time period, the quantity of the goods to be stored within the predetermined time period, and the current storage space utilization information of the warehouse.

2. The method for warehouse storage space planning according to claim 1, wherein the warehouse goods change information of the predetermined time period is obtained in the following manner:

obtaining data of a goods storage or delivery-related notice to be processed within the predetermined time period.

3. The method for warehouse storage space planning according to claim 2, wherein

the goods storage or delivery-related notice comprises one or more of the following: a return notice, a receiving notice, a delivery notice, and a sales order.

4. The method for warehouse storage space planning according to any one of the preceding claims 1 to 3, wherein a method for obtaining the current storage space utilization information of the warehouse comprises:

obtaining the current storage space utilization information of the warehouse based on a warehouse storage space record of a warehouse system management platform, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage space; or

obtaining the current storage space utilization information of the warehouse based on storage space status information transferred from a warehouse goods positioning system, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage space.

5. The method for warehouse storage space planning according to any one of the preceding claims 1 to 4, wherein the storage attribute parameter comprises at least one of the following goods parameters: overall goods size and overall goods weight.

6. The method for warehouse storage space planning according to any one of the preceding claims 1 to 5, wherein the storage attribute parameter calculation model is obtained by:

obtaining, from a database, data of goods with a known storage attribute parameter as sample data; and

obtaining, through learning via a machine learning algorithm by using goods parameters of the sample data, the storage attribute parameter calculation model.

7. The method for warehouse storage space planning according to any one of the preceding claims 1 to 6, wherein the machine learning algorithm comprises a neural network model algorithm.

8. The method for warehouse storage space planning according to any one of

claims 1 to 7, wherein:

the determining a preset storage space in the warehouse for the quantity of goods to be stored within the predetermined time period comprises determining the preset storage space in the warehouse for the quantity of goods to be stored within the predetermined time period according to a preset rule; and

the preset rule comprises: the storage attribute parameter of the quantity of goods to be stored within the predetermined time period for which a space needs to be arranged matches a storage space attribute of the preset storage space.

9. The method for warehouse storage space planning according to claim 8, wherein the preset rule further comprises at least one of the following: goods of a same brand are stored in neighboring storage spaces, or goods of a same owner are stored in neighboring storage spaces, or goods of a same category are stored in neighboring storage spaces.

10. The method for warehouse storage space planning according to any one of claims 1 to 9, wherein the preset storage space comprises a plurality of alternative storage spaces; and during a process of entering the quantity of goods to the warehouse for storing, the storing is arranged in a recommended sequence, and if a selected alternative storage space has been occupied, a next alternative storage space is used.

11. The method for warehouse storage space planning according to any one of claims 1 to 10, further comprising:

during the process of entering the quantity of goods to the warehouse for storing, when the preset storage space is occupied, re-planning a storage space in the warehouse based on the warehouse goods change information of the predetermined time period and the storage space utilization information of the warehouse, and determining a new preset storage space for the quantity of goods to be stored within the predetermined time period based on a planning result.

12. A device for warehouse storage space planning having at least a processor and a memory containing instructions executed by the processor, the device comprising the following units:

an obtaining unit configured to obtain warehouse goods change information of a predetermined time period and current storage space utilization information of a warehouse, wherein the predetermined time period is a future time period;

an extraction unit configured to extract a plurality of goods identifiers for a quantity of goods to be stored within the predetermined time period from the warehouse goods change information of the predetermined time period;

a storage attribute parameter determining unit configured to determine a storage attribute parameter of the quantity of goods to be stored within the predetermined time period based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period by:

querying a network or a database for goods parameters of the quantity of goods based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period; and

inputting the goods parameters into a storage attribute parameter calculation model to determine the storage attribute parameter of the quantity of goods; and

a storage space planning unit configured to determine a preset storage space in the warehouse for the quantity of goods to be stored within the predetermined time period based on the storage attribute parameter of the quantity of goods to be stored within the predetermined time period, the quantity of the goods to be stored within the predetermined time period, and the current storage space utilization information of the warehouse.

13. The device for warehouse storage space planning according to claim 12, wherein the obtaining, by the obtaining unit, current storage space utilization information of the warehouse comprises:

obtaining the current storage space utilization information of the warehouse based on a warehouse storage space record of a warehouse system management platform, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage space; or

obtaining the current storage space utilization information of the warehouse based on storage space status information transferred from a warehouse goods positioning system, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage

space.

14. The device for warehouse storage space planning according to either one of claim 12 and claim 13, wherein the storage attribute parameter comprises at least one of the following goods parameters: overall goods size and overall goods weight.

15. The device for warehouse storage space planning according to claim 14, wherein the storage attribute parameter determining subunit comprises:

a sample data obtaining subunit configured to obtain, from a system-maintained database, data of goods with a known storage attribute parameter as sample data; and

a calculation model subunit configured to obtain, through learning via a machine learning algorithm by using goods parameters of the sample data, the storage attribute parameter calculation model.

16. The device for warehouse storage space planning according to claim 15, wherein a machine learning algorithm used by the calculation model subunit is a neutral network model algorithm.

17. An electronic device for warehouse storage space planning, comprising an arithmetic logical unit, a storage device, an input device, an output device, and a controller, wherein the storage device stores a program, and when the program is executed, the method for warehouse storage space planning according to any one of claims 1 to 11 can be performed.

18. A non-transitory computer-readable storage medium storing instructions that, when executed by a processor, cause the processor to perform a method for warehouse storage space planning, the method comprising:

obtaining warehouse goods change information of a predetermined time period and current storage space utilization information of a warehouse, wherein the predetermined time period is a future time period;

extracting a plurality of goods identifiers for a quantity of goods to be stored within the predetermined time period from the warehouse goods change information of the predetermined time period;

determining a storage attribute parameter of the quantity of goods to be stored within the predetermined time period based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period by:

querying a network or a database for goods parameters of the quantity of goods based on the plurality of goods identifiers of the quantity of goods to be stored within the predetermined time period; and

inputting the goods parameters into a storage attribute parameter calculation model to determine the storage attribute parameter of the quantity of goods; and

determining a preset storage space in the warehouse for the quantity of goods to be stored within the predetermined time period based on the storage attribute parameter of the quantity of goods to be stored within the predetermined time period, the quantity of the goods to be stored within the predetermined time period, and the current storage space utilization information of the warehouse.

19. The non-transitory computer-readable storage medium according to claim 18, wherein the obtaining current storage space utilization information of the warehouse comprises:

obtaining the current storage space utilization information of the warehouse based on a warehouse storage space record of a warehouse system management platform, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage space; or

obtaining the current storage space utilization information of the warehouse based on storage space status information transferred from a warehouse goods positioning system, wherein the storage space utilization information comprises location and quantity information and capacity and load information of an idle and available storage space.