CLAIMS

[Claim 1]

A potential customer estimation device comprising:

first attribute information extraction means for extracting first attribute information included in consumption behavior information of a plurality of customers and associating the first attribute information with each associated customer;

second attribute information identification means for identifying second attribute information extended based on the first attribute information and associating the second attribute information with each associated customer;

natural language query reception means for receiving an input of one or more natural language queries indicating a customer image to be extracted;

relevance calculation means for calculating a second relevance between the one or more natural language queries and the second attribute information; and

potential customer estimation means for estimating a potential customer based on the second relevance.

[Claim 2]

The potential customer estimation device according to claim 1, wherein the potential customer estimation means calculates a score based on the second relevance for each of the customers, creates a ranking obtained by rearranging the customers based on the calculated score, and estimates a potential customer based on the second relevance or the ranking.

[Claim 3]

The potential customer estimation device according to claim 1 or 2, further comprising a phrase identification means for analyzing the one or more natural language queries and identifying a phrase to be used for calculation of the second relevance,

wherein the relevance calculation means calculates the second relevance between the phrase and the second attribute information.

[Claim 4]

The potential customer estimation device according to claim 1 or 2, wherein

the relevance calculation means further calculates a first relevance between the one or more natural language queries and the first attribute information, and

the potential customer estimation means estimates the potential customer based on the first relevance and the second relevance.

[Claim 5]

The potential customer estimation device according to claim 1 or 2, further comprising estimation optimization means for evaluating whether the estimation of the potential customer is proper based on an action history of the potential customer after the estimation, and enhancing estimation accuracy of the potential customer.

[Claim 6]

The potential customer estimation device according to claim 1 or 2, further comprising store attribute information identification means for identifying store attribute information extended based on business category information about each store, wherein

the relevance calculation means further calculates a third relevance between the one or more natural language queries and the store attribute information, and

the potential customer estimation means estimates that a customer high in the second relevance and a store high in the third relevance are high in similarity.

[Claim 7]

The potential customer estimation device according to claim 1 or 2, wherein

the second attribute information identification means identifies current second attribute information based on past second attribute information assigned to each of the customers and associates the current second attribute information

with the customer,

the relevance calculation means calculates a fourth relevance between the one or more natural language queries and the current second attribute information, and

the potential customer estimation means estimates a potential customer based on the fourth relevance.

[Claim 8]

A potential customer estimation system comprising:

an attribute information database that stores identification information for identifying a plurality of customers and first attribute information and second attribute information on each customer in association with each other; and

a potential customer estimation device capable of communicating with the attribute information database, wherein

the potential customer estimation device:

extracts first attribute information included in consumption behavior information of a plurality of customers and associates the first attribute information with each associated customer;

identifies second attribute information extended based on the first attribute information and associates the second attribute information with each associated customer;

receives an input of one or more natural language queries indicating a customer image to be extracted;

calculates a second relevance between the one or more natural language queries and the second attribute information; and

estimates a potential customer based on the second relevance.

[Claim 9]

The potential customer estimation system according to claim 8, wherein the potential customer estimation device calculates a score based on the relevance for each of the customers, creates a ranking obtained by rearranging the customers based on the calculated score, and estimates a potential customer based on the relevance or the ranking.

[Claim 10]

The potential customer estimation system according to claim 8 or 9, wherein

the potential customer estimation device further comprises a phrase identification unit for analyzing the one or more natural language queries and identifying a phrase to be used for calculation of the second relevance, and

the relevance calculation unit calculates the second relevance between the phrase and the second attribute information.

[Claim 11]

The potential customer estimation system according to claim 8 or 9, wherein

the relevance calculation unit further calculates a first relevance between the one or more natural language queries and the first attribute information, and

the potential customer estimation unit estimates the potential customer based on the first relevance and the second relevance.

[Claim 12]

The potential customer estimation system according to claim 8 or 9, wherein the potential customer estimation device further comprises an estimation optimization unit for evaluating whether the estimation of the potential customer is proper based on an action history of the potential customer after the estimation, and enhancing estimation accuracy of the potential customer.

[Claim 13]

The potential customer estimation system according to claim 8 or 9, wherein

the potential customer estimation device further comprises a store attribute information identification unit for identifying store attribute information extended based on business category information about each store,

the relevance calculation unit further calculates a third relevance between the one or more natural language queries and the store attribute information, and

the potential customer estimation unit estimates that a customer high in the second relevance and a store high in the third relevance are high in similarity.

[Claim 14]

The potential customer estimation system according to claim 8 or 9, wherein

the second attribute information identification unit identifies current second attribute information based on past second attributes information assigned to each of the customers and associates the current second attribute information with the customer,

the relevance calculation unit calculates a fourth relevance between the one or more natural language queries and the current second attribute information, and

the potential customer estimation unit estimates a potential customer based on the fourth relevance.

[Claim 15]

A potential customer estimation method causing a computer to execute:

extracting first attribute information included in consumption behavior information of a plurality of customers and associating the first attribute information with each associated customer;

identifying second attribute information extended based on the first attribute information and associating the second attribute information with each associated customer;

receiving an input of one or more natural language queries indicating a customer image to be extracted;

calculating a second relevance between the one or more natural language queries and the second attribute information; and

estimating a potential customer based on the second relevance.

[Claim 16]

A potential customer estimation program causing a computer to execute processing of:

extracting first attribute information included in consumption behavior information of a plurality of customers and associating the first attribute information with each associated customer;

identifying second attribute information extended based on the first attribute information and associating the second attribute information with each associated customer;

receiving an input of one or more natural language queries indicating a customer image to be extracted;

calculating a second relevance between the one or more natural language queries and the second attribute information; and

estimating a potential customer based on the second relevance.

[Claim 17]

The potential customer estimation program according to claim 16, further causing the computer to execute processing of: calculating a score based on the second relevance for each of the customers, creating a ranking obtained by rearranging the customers based on the calculated score, and estimating a potential customer based on the second relevance or the ranking.

[Claim 18]

The potential customer estimation program according to claim 16 or 17, further causing the computer to execute processing of:

analyzing the one or more natural language queries and identifying a phrase to be used for calculation of the second relevance; and

calculating the second relevance between the phrase and the second attribute information.

[Claim 19]

The potential customer estimation program according to claim 16 or 17, further causing the computer to execute processing of:

further calculating a first relevance between the one or more natural language queries and the first attribute information; and

estimating the potential customer based on the first relevance and the

second relevance.

[Claim 20]

The potential customer estimation program according to claim 16 or 17, further causing the computer to execute processing of evaluating whether the estimation of the potential customer is proper based on an action history of the potential customer after the estimation, and enhancing estimation accuracy of the potential customer.