DESCRIPTION

Title of Invention:

POTENTIAL CUSTOMER ESTIMATION DEVICE, POTENTIAL CUSTOMER ESTIMATION SYSTEM, POTENTIAL CUSTOMER ESTIMATION METHOD, AND POTENTIAL CUSTOMER ESTIMATION PROGRAM

Technical Field

[0001]

The present disclosure relates to a potential customer estimation device, a potential customer estimation system, a potential customer estimation method, and a potential customer estimation program.

Background Art

[0002]

In recent years, techniques related to attempts to analyze consumption behavior data of customers and utilize the data for marketing have been developed. For example, PTL 1 discloses a technique for efficiently providing a search result matching a user's intention and related information related to a query target for an input natural language query. PTL 2 discloses a technique of searching for content by matching images based on a similarity score in response to a search query, and evaluating the matching between the content and the image by an evaluation score. PTL 3 discloses a technique for identifying social emotions in a clause of text such as a user query, an article, a book, a problem ticket, and the like, and generating a natural language text response that conveys or expresses an emotion suitable for the identified social emotion in the clause of an original text.

Citation List

Patent Literature

[0003]

PTL 1: JP 2016-018566 A
PTL 2: JP 2017-220203 A
PTL 3: JP-T-2021-512384 A

Summary of Invention

Technical Problem

[0004]

By analyzing consumption behavior data including consumption behavior histories of a plurality of customers, it is expected that potential customers can be found and utilized for marketing. However, since the information included in the consumption behavior data is limited, it is difficult to find a potential customer with accuracy that can be utilized for marketing even if the consumption behavior data is analyzed.

[0005]

In view of the above-described problems, embodiments of the present disclosure provide a potential customer estimation device, a potential customer estimation system, a potential customer estimation method, and a potential customer estimation program capable of accurately finding a potential customer.

Solution to Problem

[0006]

According to a first aspect of the present disclosure, there is provided a potential customer estimation device that includes:

a first attribute information extraction unit 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;

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

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

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

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

[0007]

According to a second aspect of the present disclosure, there is provided a potential customer estimation system that includes:

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, in which

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.

[0008]

According to a third aspect of the present disclosure, there is provided a potential customer estimation method that causes 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.

[0009]

According to a fourth aspect of the present disclosure, there is provided a potential customer estimation program that causes 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.

Advantageous Effects of Invention

[0010]

According to embodiments the present disclosure, it is possible to provide a potential customer estimation device, a potential customer estimation system, a potential customer estimation method, and a potential customer estimation program capable of accurately finding a potential customer.

Brief Description of Drawings

[0011]

[Fig. 1] Fig. 1 is a block diagram illustrating a configuration of a potential customer estimation device according to the present disclosure.

[Fig. 2] Fig. 2 is a flowchart illustrating an example of a flow of a potential customer estimation method according to the present disclosure.

[Fig. 3] Fig. 3 is a block diagram illustrating a configuration of a potential customer estimation system according to the present disclosure.

[Fig. 4] Fig. 4 is a block diagram illustrating a configuration of a service request apparatus capable of communicating with the potential customer estimation system according to the present disclosure.

[Fig. 5] Fig. 5 is a block diagram illustrating a configuration of a potential customer estimation device according to the present disclosure.

[Fig. 6] Fig. 6 is a sequence diagram illustrating an operation of the potential customer estimation system in a case where associating attribute information.

[Fig. 7] Fig. 7 is a diagram illustrating an example of a usage history and second attribute information.

[Fig. 8] Fig. 8 is a sequence diagram illustrating an operation of a