

Case 1

<Patent eligibility>

“Trained Model for Analyzing Reputations of Accommodations”

(Case 2-14 ; Examination Handbook for Patent and Utility Model “Annex B Chapter 1”)



[Claim 1]

A trained model for causing a computer to function to output quantified values of reputations of accommodations based on text data on reputations of accommodations, wherein;

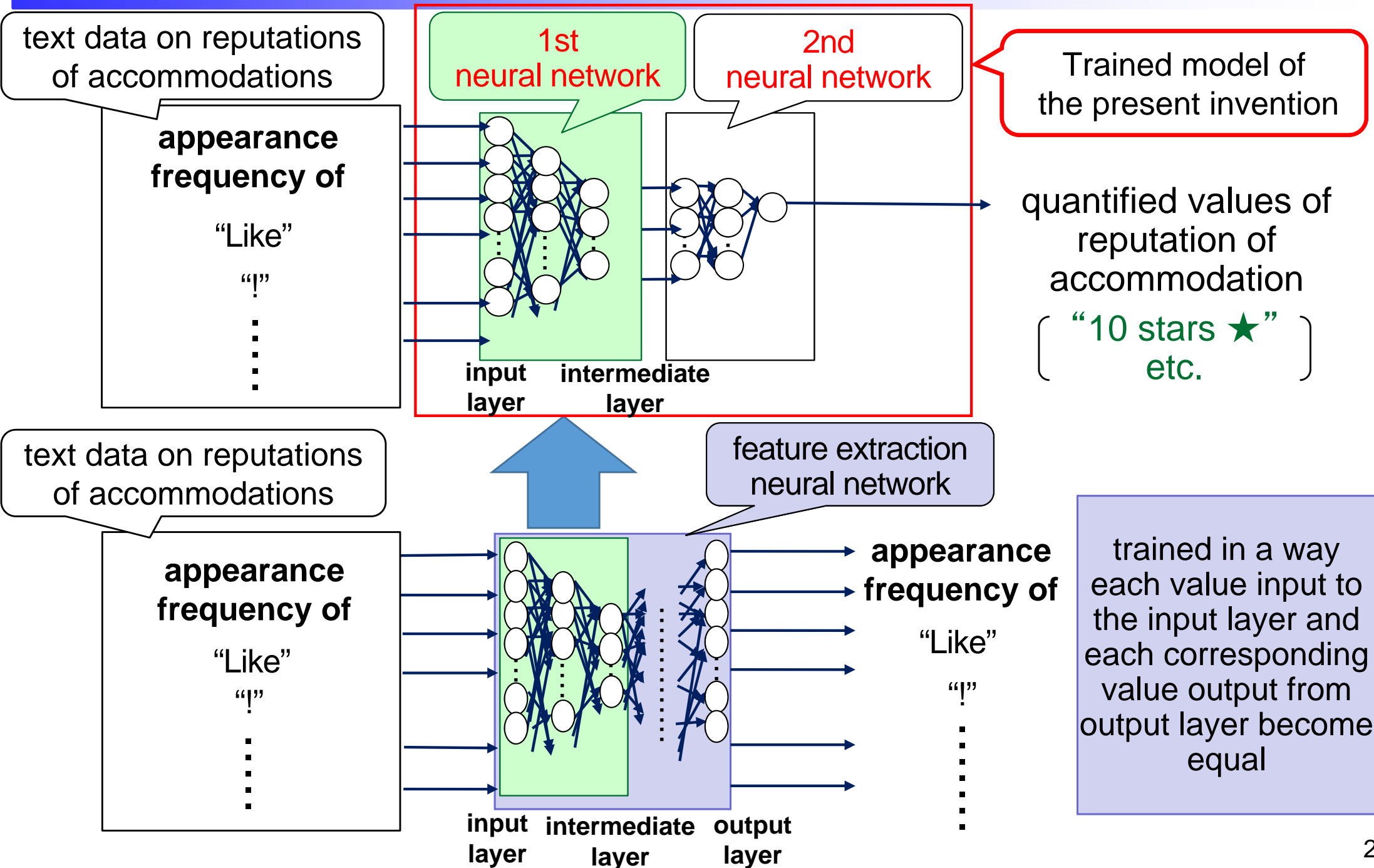
the model is comprised of a first neural network and a second neural network connected in a way that the said second neural network receives output from the said first neural network;

the said first neural network is comprised of an input layer to intermediate layers of a feature extraction neural network in which the number of neurons of at least one intermediate layer is smaller than the number of neurons of the input layer, the number of neurons of the input layer and the number of the output layer are the same, and weights were trained in a way each value input to the input layer and each corresponding value output from output layer become equal;

weights of the said second neural network were trained without changing the weights of the said first neural network; and

the model causes the computer function to perform a calculation based on the said trained weights in the said first and second neural networks in response to appearance frequency of specific words obtained from the text data on reputations of accommodations input to the input layer of the said first neural network and to output the quantified values of reputations of accommodations from the output layer of the said second neural network.

Case 1: Outline of the claimed invention



[Detailed description of the invention]

The trained model of the present invention is supposed to be utilized as a program module which constitutes a part of artificial intelligence software.

The trained model of the present invention is utilized in a computer equipped with a CPU and a memory. Specifically, the CPU of the computer operates, in accordance with instructions from the trained model stored in the memory, in a way that it performs a calculation based on trained weights and response functions in the first and second neural networks in response to data input to input layers of the first neural network (appearance frequency of specific words obtained from text data of reputations of accommodations, e.g. by performing morphological analyses) and outputs results from output layers of the second neural network (quantified values of reputations).

- **AI-related inventions use computer software.**

⇒ Determination is made through the two steps below.

1. Whether the invention utilizes a law of nature as a whole and the “creation of a technical idea utilizing a law of nature ※1”.
2. Whether the invention is determined as a “creation of a technical idea utilizing a law of nature” from the viewpoint of computer software-related inventions.

※1: Japan Patent Act defines an “invention” as the “highly advanced creation of technical ideas utilizing the laws of nature.”

- **A “program” that satisfies the requirements above is patent-eligible.**

⇒ Even if the claimed subject matter is stated with the term other than “program※2”, the claimed invention is handled as what it means, as long as it is clear in consideration of the description, drawings and the common general knowledge at the time of filing.

※2: The terms such as module, library, neural network, support vector machine, and model.

○ The invention of Claim 1 is patent-eligible.

[Explanation]

The trained model of Claim 1 is configured to cause the computer function to perform the claimed information processing.

It is clear that the trained model of Claim 1 is a "program" even though the claimed subject matter of Claim 1 is described as a "model."

Moreover, it is determined, from the statement of Claim 1, that specific calculation or processing of specific information depending on the intended use which is accurate analysis of reputations of accommodations, is implemented by concrete means or procedures.

Therefore, the trained model of Claim 1 realizes an operation process of a specific information processing system depending on intended use, and therefore, is a creation of the technical idea utilizing the laws of nature and thus falls under "invention."