

## WHAT IS CLAIMED IS:

1. An information processing apparatus comprising:
  - an acquisition means for acquiring sequence data including a plurality of data;
  - a detection means for detecting a determination target from the sequence data; and
  - a determination means for performing category determination concerning a determination target detected from the sequence data using a pre-trained determiner for performing category determination concerning the determination target and information of the determination target detected from the sequence data by the detection means; and
  - ~~a training means for: performing training of a determiner for performing category determination concerning the determination target using information of the determination target detected by the detection means and intermediate data being generated during detection processing by the detection means and being different from the information of the determination target~~
  - detecting a change in information obtained in detecting a determination target from the sequence data and performing category determination, while the determination means is sequentially performing a process on each of the plurality of data in the sequence data;
  - acquiring, from a user, feedback to the information of the determination target or a result of the category determination for the data from which the change has been detected; and
  - performing training of the determiner again using the data from which the change has been detected and the feedback.
2. The information processing apparatus according to claim 1, wherein
  - the determination means is further for performing category determination

concerning the determination target detected from the sequence data using the pre-trained determiner for performing category determination concerning the determination target, information of the determination target detected from the sequence data by the detection means, and intermediate data being generated during a detection process by the detection means and being different from the information of the determination target, and

the training means is further for performing training of a determiner for performing category determination concerning the determination target using information of the determination target detected by the detection means and intermediate data being generated during a detection processing by the detection means and being different from the information of the determination target.

3. The information processing apparatus according to claim 1, wherein the training means selects, from a plurality of feature amounts included in the intermediate data, a feature amount to be used for the training of the determiner, and holds information indicating the selected feature amount in a holding means in association with the determiner resulting from the training.

34. The information processing apparatus according to claim 23, wherein the training means generates a determiner by training using the feature amount selected from the plurality of feature amounts included in the intermediate data, and selects a feature amount to be used for the training of the determiner based on evaluation of category determination using different determiners respectively generated using different feature amounts.

45. The information processing apparatus according to claim 34, wherein the evaluation of the category determination is performed based on at least one of accuracy of the category determination or a processing cost of the category determination.

56. The information processing apparatus according to any one of claims 1-

~~45~~, wherein the training means selects, from a plurality of parameters, a processing parameter in category determination using the determiner, and holds the selected processing parameter in a holding means in association with the determiner resulting from the training.

~~67~~. The information processing apparatus according to any one of claims 1-~~56~~, wherein the training means selects, from a plurality of detection methods, a detection method of the determination target to be used for the category determination using the determiner, and holds information indicating the selected detection method in a holding means in association with the determiner resulting from the training.

~~78~~. The information processing apparatus according to any one of claims ~~1-62-5~~, wherein the training means generates a feature amount for training using the information of the determination target and the intermediate data, and performs the training of the determiner using the feature amount for training.

~~89~~. The information processing apparatus according to claim ~~78~~, wherein the training means generates the feature amount for training further using information indicating how the sequence data ~~acquired by the acquisition means~~ was generated.

~~9~~. ~~The information processing apparatus according to any one of claims 1-8,~~  
~~wherein~~

~~the acquisition means acquires sequence data including a plurality of data,~~

~~the information processing apparatus further comprises a determination means for performing the category determination concerning a determination target detected from the data using the determiner for performing the category determination concerning the determination target, information of the determination target detected from the data by the detection means, and~~

~~intermediate data being generated during the detection processing by the detection means and being different from the information of the determination target, and~~  
~~the training means;~~  
~~detects a change in information obtained by processing of detecting the determination target from the data and performing the category determination,~~  
~~while the determination means sequentially performs the category determination processing for the plurality of data;~~  
~~acquires, from a user, feedback to a result of the category determination or the information of the determination target, for the data from which the change has been detected; and~~  
~~performs the training of the determiner again using the feedback and the data from which the change has been detected.~~

10. An information processing apparatus comprising:
- an acquisition means for acquiring data;
  - a detection means for detecting a determination target from the data; and
  - a determination means for performing category determination concerning the determination target using information of the determination target detected by the detection means, ~~intermediate data being generated during detection processing by the detection means and being different from the information of the determination target,~~ and a determiner for performing category determination concerning the determination target,
- wherein the determiner is obtained by:
- acquiring sequence data including a plurality of data;
  - detecting a determination target from the data;
  - performing category determination concerning a determination target detected from the sequence data using a pre-trained determiner for performing category determination concerning the determination target and

information of the determination target detected from the sequence data;

detecting a change in information obtained in detecting a determination target from the sequence data and performing category determination, while sequentially performing category determination on each of the plurality of data in the sequence data;

acquiring, from a user, feedback to the information of the determination target or a result of the category determination for the data from which the change has been detected; and

performing training of the determiner again using the data from which the change has been detected and the feedback.

11. The information processing apparatus according to claim 10, wherein the determiner is obtained by training by the information processing apparatus according to any one of claims 1-9.

12. The information processing apparatus according to claim 10, wherein the determination means is further for performing category determination concerning the determination target using information of the determination target detected by the detection means, intermediate data being generated during a detection process by the detection means and being different from the information of the determination target, and a pre-trained determiner for performing category determination concerning the determination target, and

wherein the information processing apparatus further comprising—  
comprises a training means for performing training of the determiner for performing the category determination concerning the determination target, using the information of the determination target detected by the detection means and the intermediate data being generated during ~~the a~~ detection processing by the detection means and being different from the information of the determination target.

13. The information processing apparatus according to any one of claims 1-12, wherein the category determination concerning the determination target determines whether the determination target is abnormal.

14. The information processing apparatus according to any one of claims 1-13, wherein the sequence data is data obtained by a sensor.

15. The information processing apparatus according to any one of claims 1-14, wherein the information of the determination target is information indicating one of a position or a size of the determination target.

16. The information processing apparatus according to any one of claims 1-15, wherein

the detection means detects the determination target using a neural network, and

the intermediate data includes an output from an intermediate layer of the neural network.

17. The information processing apparatus according to any one of claims 1-15, wherein

the detection means detects a portion which constitutes the determination target from the data, and detects the determination target based on a detection result of the portion, and

the intermediate data includes the detection result of the portion.

18. An information processing method comprising:

acquiring sequence data including a plurality of data;

detecting a determination target from the sequence data; and

~~training a determiner for performing category determination concerning the determination target using information of the determination target detected and intermediate data being generated during detecting the determination target and being different from the information of the determination target~~

performing category determination concerning a determination target detected from the sequence data using a pre-trained determiner for performing category determination concerning the determination target and information of the determination target detected from the sequence data in the detecting; and

training, the training including:

detecting a change in information obtained in detecting a determination target from the sequence data and performing category determination, while sequentially performing a process on each of the plurality of data in the sequence data in the category determination;

acquiring, from a user, feedback to the information of the determination target or a result of the category determination for the data from which the change has been detected; and

performing training of the determiner again using the data from which the change has been detected and the feedback.

19. An information processing method comprising:

acquiring data;

detecting a determination target from the data; and

~~perform~~ performing category determination concerning the determination target using information of the determination target detected, intermediate data being generated during detecting the determination target and being different from the information of the determination target, in the detecting and a determiner for performing category determination concerning the determination target,

wherein the determiner is obtained by:

acquiring sequence data including a plurality of data;

detecting a determination target from the data;

performing category determination concerning a determination target detected from the sequence data using a pre-trained determiner for

performing category determination concerning the determination target and information of the determination target detected from the sequence data;

detecting a change in information obtained in detecting a determination target from the sequence data and performing category determination, while sequentially performing category determination on each of the plurality of data in the sequence data;

acquiring, from a user, feedback to the information of the determination target or a result of the category determination for the data from which the change has been detected; and

performing training of the determiner again using the data from which the change has been detected and the feedback.

20. ~~A program which, when executed by a computer comprising a processor and a memory, causes the computer to perform the information processing method~~  
function as each means of the information processing apparatus according to  
~~claim 18 or 19~~claims 1-17.