WHAT IS CLAIMED IS:

1. A method for performing machine learning process, executable by at least one computing device, the method comprising:

obtaining data;

obtaining a labelling result of the data; and

selecting at least one of a model framework meeting a requirement of a user and a model meeting a predicted target of the user, and performing model training using the data and the labelling result of the data based on at least one of the model framework and the model,

wherein the model framework is a framework used for performing the model training based on a machine learning algorithm.

2. The method of claim 1, wherein selecting at least one of the model framework meeting the requirement of the user and the model meeting the predicted target of the user comprises at least one of:

selecting a model framework from model frameworks corresponding to a task type meeting the requirement of the user; and

selecting the model meeting the predicted target of the user from previously trained models.

3. The method of claim 2, further comprising:

presetting one or more task types, and setting one or more model frameworks for each task type.

4. The method of claim 2, wherein the previously trained models are obtained by performing the model training based on corresponding model frameworks, and selecting the model meeting the predicted target of the user from previously trained models comprises:

searching for models suitable for the predicted target of the user from the previously trained models and selecting the model trained based on the model framework corresponding to the task type meeting the requirement of the user from selected models; or

selecting the model trained based on the model framework corresponding to the task type meeting the requirement of the user from the previously trained modes, and searching for the model suitable for the predicted target of the user from the selected models.

5. The method of claim 1, wherein performing the model training using the data and the labelling result of the data comprises:

performing the model training using the data and the labelling result of the data based on the selected model framework; or

updating the selected model using the data and the labelling result of the data based on the selected model; or

in a case where the model meeting the predicted target of the user is obtained, updating the obtained model using the data and the labelling result of the data, and in a case where the model meeting the predicted target of the user is not obtained, performing the model training using the data and the labelling result of the data based on the selected model framework.

6. The method of claim 1, wherein obtaining the data comprises:

obtaining a data collection requirement from the user;

parsing the data collection requirement to determine a keyword contained in data suitable for being collected; and

collecting the data containing the keyword.

7. The method of claim 1, wherein obtaining the labelling result of the data comprises:

publishing a labelling task corresponding to the predicted target of the model training based on the predicted target to obtain the labelling result of the data.

8. The method of claim 7, wherein obtaining the labelling result of the data further comprises:

presenting an object to be labelled to a labeler;

obtaining auxiliary prompt information for prompting a labelling conclusion of the object to be labelled; and

providing the auxiliary prompt information to the labeler, to allow the labeler to perform manual labelling on the object to be labelled based on the auxiliary prompt information.

9. The method of claim 1, further comprising:

storing the data and the labelling result into a user database corresponding to the user;

wherein an external use permission of the user database is related to user settings.

10. The method of claim 9, wherein in a case that the user database is set to be open to external, data in the user database is useable by another user.

11. The method of claim 1, further comprising:

saving a trained model obtained by the model training,

wherein an external use permission of the trained model is related to user settings.

12. The method of claim 11, wherein in a case that the trained model is set to be open to external, the trained model is useable by another user.

13. The method of claim 1, further comprising:

generating a user-oriented application programming interface in response to a model application request from the user after the model training is completed, to allow the user to obtain a prediction service provided by the model through the application programming interface.

14. The method of claim 13, further comprising:

receiving feedback information on the prediction service from the user; and

updating the model based on the feedback information.

15. The method of claim 14, wherein the feedback information comprises an updated label for correcting a predicted label provided by the prediction service,

wherein updating the model comprises: generating new training samples based on the updated label of data corresponding to the predicted label and the data corresponding to the predicted label, and updating the model using the new training samples.

16. The method of claim 14, wherein the feedback information comprises rejection information of rejecting a predicted label provided by the prediction service,

wherein updating the model comprises: re-obtaining a labelling label of data corresponding to the rejected predicted label, generating new training samples based on the data and the re-obtained labelling result, and updating the model using the new training samples.

17. The method of claim 13, further comprising:

interpreting influences of different input parts of an input on an output after the output is obtained by predicting the input by the user using the model.

18. The method of claim 17, wherein interpreting the influences of different input parts of the input on the output comprises:

dividing the input into a plurality of input parts;

for each input part, performing a transformation operation on the input part while keeping other input parts unchanged to obtain a new input;

inputting each new input to the model to obtain a new output from the model based on the new input;

determining the influences of different input parts on the output based on differences between the new outputs and the output; and

notifying the user of the influences of different input parts on the output in an understandable form.

19. The method of claim 13, further comprising：

dynamically adjusting resources required by the prediction service provided by the service based on an amount of prediction requirements issued by the user through the application programming interface.

20. An apparatus comprising at least one computing device and at least one storage device having instructions stored thereon, wherein when the instructions are executed by the at least one computing device, the at least one computing device is caused to perform machine learning process to perform a method for performing machine learning process of any one of claims 1 to 19.

21. An apparatus for performing machine learning process, comprising:

a data obtaining module, configured to obtain data;

a labelling result obtaining module, configured to obtain a labelling result of the data;

a selecting module, configured to select at least one of a model framework meeting a requirement of a user and a model meeting a predicted target of the user, wherein the model framework is a framework used for performing model training based on a machine learning algorithm; and

a training module, configured to perform the model training using the data and the labelling result of the data based on at least one of the model framework and the model.

22. A computer readable storage medium, having instructions stored thereon, wherein when the instructions are executed by at least one computing device, the at least one computing device is caused to perform a method of any one of claims 1 to 19.

ABSTRACT

A method, an apparatus, and a device for performing machine learning process and a storage medium are provided. The method includes the following. Data is obtained. A labelling result of the data is obtained. At least one of a model framework matching a requirement of a user and a model matching a predicted target of the user is selected. The model training is performed based on the selected model framework and/or the selected mode, using the data and the labelling result of the data . The model framework is used to perform the model training based on a machine learning algorithm.