

CLAIMS

1. An improved prediction system using heterogeneous data, the improved prediction system comprising:

a prediction model generator configured to generate one or more prediction models via artificial intelligence (AI) learning, based on basic data and one or more pieces of heterogeneous data including different features from the feature of the basic data; and

a champion model selector configured to select a prediction model having highest prediction accuracy as a champion model by analyzing performance of each of the one or more prediction models,

wherein prediction is performed using the selected champion model, wherein the champion model selector is further configured to re-select the champion model according to a preset condition, wherein the preset condition is one of degradation of prediction accuracy of the champion model compared with prediction accuracy of another prediction model and degradation of prediction accuracy of the champion model compared with a predetermined reference value.

2. The improved prediction system of claim 1, wherein the prediction model generator is further configured to generate a new prediction model by using new heterogeneous data including a new feature different from the feature of existing data, during re-selection of the champion model, and

the champion model selector is further configured to re-select the champion model from among the existing prediction model and the new prediction model.

3. The improved prediction system of claim 1, further comprising a major feature selector configured to select a major feature affecting prediction accuracy of each of the one or more prediction models, based on a weight of the feature of each of the one or more prediction models.

4. The improved prediction system of claim 3, wherein the prediction model generator is further configured to generate a new prediction model via AI learning, based on the major feature selected by the major feature selector,

and

the champion model selector is further configured to select the champion model by including the new prediction model as a champion model candidate.

5. The improved prediction system of claim 1, wherein the heterogeneous data is received from one or more external servers.

6. An improved prediction method using heterogeneous data, the improved prediction method comprising:

a prediction model generation operation of generating one or more prediction models via artificial intelligence (AI) learning, based on basic data and one or more pieces of heterogeneous data including different features from the feature of the basic data; and

a champion model selection operation of selecting a prediction model having highest prediction accuracy as a champion model by analyzing performance of each of the one or more prediction models; and

a prediction operation of performing prediction using the selected champion model, wherein the champion model selection operation comprises re-selecting the champion model according to a preset condition, wherein the preset condition is one of degradation of prediction accuracy of the champion model compared with prediction accuracy of another prediction model and degradation of prediction accuracy of the champion model compared with a predetermined reference value.

7. The improved prediction method of claim 6, wherein
the prediction model generation operation comprises generating a new prediction model by using new heterogeneous data including a new feature different from the feature of existing data, during re-selection of the champion model, and
the champion model selection operation comprises re-selecting the champion model from among the existing prediction model and the new prediction model.

8. The improved prediction method of claim 6, further comprising:
a weight calculation operation of calculating a weight of the feature of each of

the one or more prediction models;

an influence determination operation of determining a level of influence upon the prediction accuracy of each of the prediction models, based on the weights; and

a major feature selection operation of selecting a major feature from the features, based on the influences.

9. The improved prediction method of claim 8, wherein
the prediction model generation operation comprises generating a new prediction model via AI learning, based on the major feature selected in the major feature selection operation, and
the champion model selection operation comprises selecting the champion model by including the new prediction model as a champion model candidate.