

What is claimed is:

1. A method for providing information that relates to triggering a margin call with respect to a first securities portfolio, the method being implemented by at least one processor, the method comprising:
 - obtaining, by the at least one processor, a plurality of data relating to a plurality of securities portfolios from a public data source and a private data source;
 - parsing, by the at least one processor, the plurality of data;
 - identifying, by the at least one processor in the parsed plurality of data, personally identifiable information that corresponds to at least one investor;
 - removing, by the at least one processor, the identified personally identifiable information from the plurality of data and anonymizing remaining data of the plurality of data;
 - automatically determining, by the at least one processor using the anonymized data, at least one data pattern relating to triggering the margin call and at least one corresponding characteristic contributing to triggering the margin call by,
 - identifying, by the at least one processor, at least one contributing factor to the margin call from the anonymized data;
 - determining, by the at least one processor, a magnitude of impact for each of the at least one contributing factor, the magnitude of impact including a percentage of contribution to the margin call and a probability percentage of contribution to the margin call; and
 - determining, by the at least one processor, the at least one corresponding characteristic from the at least one contributing factor based on the magnitude of impact;
 - automatically generating, by the at least one processor and in a memory, at least one model based on the at least one data pattern and the at least one characteristic;
 - training, by the at least one processor, the at least one model by using the anonymized data;
 - assessing, by the at least one processor, the trained at least one model by,
 - determining, by the at least one processor for the trained at least one model, whether a true positive rate, a true negative rate, a false positive rate, and a false negative rate correspond to a predetermined range;

determining whether an accuracy level of the trained at least one model developed using the anonymized data is sufficient based on a predetermined criteria;

when the at least one model is determined not to be sufficiently accurate, iteratively gathering additional data and modifying the trained at least one model by incorporating the additional data until the accuracy level of the at least one model is determined to be sufficient according to the predetermined criteria;

deploying the at least one model when the at least one model is determined to be sufficiently accurate;

evaluating, by the at least one processor based on a result of the assessment, the first securities portfolio using the deployed at least one model by,

determining, by the at least one processor using the deployed at least one model, a first information relating to whether to trigger a first margin call with respect to the first securities portfolio,

wherein the first information includes a probability metric and a corresponding trigger requirement;

automatically determining, by the at least one processor using the deployed at least one model, at least one recommended action based on the first information;

receiving, by the at least one processor via a graphical user interface, feedback information from at least one user; and

refining the deployed at least one model based on the at least one recommended action that is automatically determined and the feedback information.

2. The method of claim 1, wherein the evaluating further comprises:

selecting, by the at least one processor, a first one of the at least one data pattern and a first one of the at least one corresponding characteristic relating to triggering the first margin call for the first securities portfolio; and

displaying, by the at least one processor via a display, the first information on a graphical user interface together with the selected first one of the at least one data pattern and the selected first one of the at least one corresponding characteristic.

3. The method of claim 1, wherein the at least one model is generated automatically using machine learning analysis of the anonymized data.

4. The method of claim 1, wherein the at least one model includes at least one from among a data model, a mathematical model, a process model, and a machine learning model.

5. The method of claim 1, further comprising:

evaluating, by the at least one processor, a second securities portfolio using the at least one model to determine a second information relating to whether to trigger a future second margin call with respect to the second securities portfolio; and

displaying, by the at least one processor via a display, the second information on a graphical user interface.

6. The method of claim 5, wherein the graphical user interface includes at least one dashboard that displays at least one from among monitoring information relating to the first securities portfolio and classification information relating to the at least one characteristic.

7. The method of claim 1, wherein the at least one characteristic includes at least one from among a securities appreciation characteristic, a securities depreciation characteristic, an assets market value difference characteristic, a securities market value difference characteristic, a securities market value buy characteristic, an exposure difference characteristic, a cash market value difference characteristic, a collateral difference characteristic, a cash market value sell characteristic, a haircut difference characteristic, a securities market value sell characteristic, a securities liquidation value buy characteristic, a cash market value appreciation characteristic, a cash market value depreciation characteristic, a pledge market value out characteristic, a pledge market value difference characteristic, a cash market value buy characteristic, a derivative exposure delta characteristic, a derivative initial margin exposure delta characteristic, a pledge liquidation value in characteristic, an accrued interest accumulation characteristic, a pledge market value in characteristic, a pledge market value appreciation characteristic, a pledge market value depreciation characteristic, a derivative negative mark-to-market delta characteristic, a lending value fluctuation due to foreign exchange movements characteristic, private equity calls or accrued interest debited with a future value date characteristic, and an unlimited pledge difference characteristic.

8. The method of claim 1, wherein the feedback information includes at least one from among a first information accuracy ranking, a second information accuracy ranking, and a characteristic accuracy ranking.

9. A computing device configured to implement an execution of a method for providing information that relates to triggering a margin call with respect to a first securities portfolio, the computing device comprising:

- a processor;

- a memory; and

- a communication interface coupled to each of the processor and the memory, wherein the processor is configured to:

 - obtain a plurality of data relating to a plurality of securities portfolios from a public data source and a private data source;

 - parse the plurality of data;

 - identify, in the parsed plurality of data, personally identifiable information that corresponds to at least one investor;

 - remove the identified personally identifiable information from the plurality of data and anonymize remaining data of the plurality of data;

 - automatically determine, by using the anonymized data, at least one data pattern relating to triggering the margin call and at least one corresponding characteristic contributing to triggering the margin call by causing the processor to:

 - identify at least one contributing factor to the margin call from the anonymized data;

 - determine a magnitude of impact for each of the at least one contributing factor, the magnitude of impact including a percentage of contribution to the margin call and a probability percentage of contribution to the margin call; and

 - determine the at least one corresponding characteristic from the at least one contributing factor based on the magnitude of impact;

 - automatically generate, in the memory, at least one model based on the at least one data pattern and the at least one characteristic;

train the at least one model by using the anonymized data;
assess the trained at least one model by causing the processor to,
 determine, for the trained at least one model, whether a true
 positive rate, a true negative rate, a false positive rate, and a false
 negative rate correspond to a predetermined range;
determine whether an accuracy level of the trained at least one model
developed using the anonymized data is sufficient based on a predetermined
criteria;
 when the at least one model is determined not to be sufficiently
accurate, iteratively gather additional data and modify the trained at least one
model by incorporating the additional data until the accuracy level of the at
least one model is determined to be sufficient according to the predetermined
criteria;
 deploy the at least one model when the at least one model is
determined to be sufficiently accurate;
 evaluate, based on a result of the assessment, the first securities
portfolio using the at least one model by causing the processor to,
 determine, by using the at least one model, a first information
relating to whether to trigger a first margin call with respect to the first
securities portfolio,
 wherein the first information includes a probability metric and
a corresponding trigger requirement;
 automatically determine, by using the deployed at least one model, at
least one recommended action based on the first information;
 receive, via a graphical user interface, feedback information from at
least one user; and
 refine the deployed at least one model based on the at least one
recommended action that is automatically determined and the feedback
information.

10. The computing device of claim 9, wherein, for the evaluating, the
processor is further configured to:

select a first one of the at least one data pattern and a first one of the at least one corresponding characteristic relating to triggering the first margin call for the first securities portfolio; and

display, via a display, the first information on a graphical user interface together with the selected first one of the at least one data pattern and the selected first one of the at least one corresponding characteristic.

11. The computing device of claim 9, wherein the processor is further configured to automatically generate the at least one model by using machine learning analysis of the anonymized data.

12. The computing device of claim 9, wherein the at least one model includes at least one from among a data model, a mathematical model, a process model, and a machine learning model.

13. The computing device of claim 9, wherein the processor is further configured to:

evaluate a second securities portfolio using the at least one model to determine a second information relating to whether to trigger a future second margin call with respect to the second securities portfolio; and

display, via a display, the second information on a graphical user interface.

14. The computing device of claim 13, wherein the graphical user interface includes at least one dashboard that displays at least one from among monitoring information relating to the first securities portfolio and classification information relating to the at least one characteristic.

15. The computing device of claim 9, wherein the at least one characteristic includes at least one from among a securities appreciation characteristic, a securities depreciation characteristic, an assets market value difference characteristic, a securities market value difference characteristic, a securities market value buy characteristic, an exposure difference characteristic, a cash market value difference characteristic, a collateral difference characteristic, a cash market value sell characteristic, a haircut difference characteristic, a securities market value sell

characteristic, a securities liquidation value buy characteristic, a cash market value appreciation characteristic, a cash market value depreciation characteristic, a pledge market value out characteristic, a pledge market value difference characteristic, a cash market value buy characteristic, a derivative exposure delta characteristic, a derivative initial margin exposure delta characteristic, a pledge liquidation value in characteristic, an accrued interest accumulation characteristic, a pledge market value in characteristic, a pledge market value appreciation characteristic, a pledge market value depreciation characteristic, a derivative negative mark-to-market delta characteristic, a lending value fluctuation due to foreign exchange movements characteristic, private equity calls or accrued interest debited with a future value date characteristic, and an unlimited pledge difference characteristic.

16. The computing device of claim 9, wherein the feedback information includes at least one from among a first information accuracy ranking, a second information accuracy ranking, and a characteristic accuracy ranking.