

CLAIMS

WHAT IS CLAIMED IS:

1. A computer-implemented method for risk identification of service data, the method being executed by one or more processors and comprising:

determining, by a client-side computing device, a first service data corresponding to a first operation behavior that was performed at a first time and associated with a user input on the client-side computing device;

determining, by the client-side computing device, a first variable corresponding to the first service data, the first variable comprising a first eigenvalue;

retrieving, by the client-side computing device, a second eigenvalue corresponding to a second operation behavior that was performed at a second time before the first operation behavior;

generating, by the client-side computing device, a decay value by processing the first time and the second time as input using a decay function, the decay function representing a weight of the second operation behavior;

generating, by the client-side computing device, an aggregated data by processing the first variable, the second eigenvalue, and the decay value using an aggregation function; and

determining, by the one or more processors, a risk associated with the first operation by processing the aggregated data using a risk identification model.

2. The method of claim 1, further comprising, in response to generating the aggregated data, deleting the second eigenvalue.

3. The method of claim 1, wherein the one or more processors are integrated in a server-side computing device.

4. The method of claim 3, further comprising transmitting the aggregated data from the client-side computing device to the server-side computing device.

5. The method of claim 4, wherein the aggregation function comprises a mathematical operation defining at least one of a summing operation, an identification of a maximum value, and an identification of non-repetitive results.

6. The method of claim 1, wherein the decay function comprises a mathematical operation defining at least one of an exponential function, a logarithmic function, a trigonometric function, a moving window type function, and a polynomial type function.

7. The method of claim 1, further comprising displaying the risk associated with the first operation to a user of the client-side computing device.

8. A non-transitory, computer-readable medium storing one or more instructions executable by a computer system to perform operations comprising:

determining, by a client-side computing device, a first service data corresponding to a first operation behavior that was performed at a first time and associated with a user input on the client-side computing device;

determining, by the client-side computing device, a first variable corresponding to the first service data, the first variable comprising a first eigenvalue;

retrieving, by the client-side computing device, a second eigenvalue corresponding to a second operation behavior that was performed at a second time before the first operation behavior;

generating, by the client-side computing device, a decay value by processing the first time and the second time as input using a decay function, the decay function representing a weight of the second operation behavior;

generating, by the client-side computing device, an aggregated data by processing the first variable, the second eigenvalue, and the decay value using an aggregation function; and

determining, by the one or more processors, a risk associated with the first operation by processing the aggregated data using a risk identification model.

9. The non-transitory, computer-readable medium of claim 8, further comprising, in response to generating the aggregated data, deleting the second eigenvalue.

10. The non-transitory, computer-readable medium of claim 8, wherein the one or more processors are integrated in a server-side computing device.

11. The non-transitory, computer-readable medium of claim 10, further comprising transmitting the aggregated data from the client-side computing device to the server-side computing device.

12. The non-transitory, computer-readable medium of claim 11, wherein the aggregation function comprises a mathematical operation defining at least one of a summing operation, an identification of a maximum value, and an identification of nonrepetitive results.

13. The non-transitory, computer-readable medium of claim 8, wherein the decay function comprises a mathematical operation defining at least one of an exponential function, a logarithmic function, a trigonometric function, a moving window type function, and a polynomial type function.

14. The non-transitory, computer-readable medium of claim 8, further comprising displaying the risk associated with the first operation to a user of the client-side computing device.

15. A computer-implemented system, comprising:
one or more computers; and
one or more computer memory devices interoperably coupled with the one or more computers and having tangible, non-transitory, machine-readable media storing instructions that, when executed by the one or more computers, perform operations comprising:

determining, by a client-side computing device, a first service data corresponding to a first operation behavior that was performed at a first time and associated with a user input on the client-side computing device;

determining, by the client-side computing device, a first variable corresponding to the first service data, the first variable comprising a first eigenvalue;

retrieving, by the client-side computing device, a second eigenvalue corresponding to a second operation behavior that was performed at a second time before the first operation behavior;

generating, by the client-side computing device, a decay value by processing the first time and the second time as input using a decay function, the decay function representing a weight of the second operation behavior;

generating, by the client-side computing device, an aggregated data by processing the first variable, the second eigenvalue, and the decay value using an aggregation function; and

determining, by the one or more processors, a risk associated with the first operation by processing the aggregated data using a risk identification model.

16. The computer-implemented system of claim 15, further comprising, in response to generating the aggregated data, deleting the second eigenvalue.

17. The computer-implemented system of claim 15, wherein the one or more processors are integrated in a server-side computing device.

18. The computer-implemented system of claim 17, further comprising transmitting the aggregated data from the client-side computing device to the server-side computing device.

19. The computer-implemented system of claim 18, wherein the aggregation function comprises a mathematical operation defining at least one of a summing operation, an identification of a maximum value, and an identification of non-repetitive results.

20. The computer-implemented system of claim 19, wherein the decay function comprises a mathematical operation defining at least one of an exponential function, a logarithmic function, a trigonometric function, a moving window type function, and a polynomial type function.