

WHAT IS CLAIMED IS:

1. A computing system implementing a cognitive-based risk assessment service, comprising:
 - a network communication interface to communicate, over one or more networks, with computing devices of users of the cognitive-based risk assessment service;
 - one or more processors; and
 - a memory resource storing instructions that, when executed by the one or more processors, cause the computing system to:
 - access, over the one or more networks, motor vehicle records of a plurality of control base users;
 - provide, over the one or more networks, a cognitive assessment test to computing devices of the plurality of control base users;
 - receive, over the one or more networks, first response data from the computing devices of the plurality of control base users, the first response data corresponding to the plurality of the control base users providing responses to each cognitive quiz problem of the cognitive assessment test;
 - execute a correlation model to (i) based on the first response data from each control base user, generate a set of cognitive risk scores for the control base user, the set of cognitive risk scores corresponding to a number of cognitive health metrics of the control base user, and (ii) determine a set of correlations between the cognitive health metrics of the plurality of control base users and vehicle accident risk as indicated in the motor vehicle records of the plurality of control base users;
 - provide, over the one or more networks, the cognitive assessment test to computing devices of inquiring users of the cognitive-based risk assessment service;
 - for each inquiring user, receive, over the one or more networks, second response data from the computing device of the inquiring user, the second response data corresponding to the inquiring user providing responses to each cognitive quiz problem in the cognitive assessment test;

using the second response data, execute the correlation model to determine a set of cognitive risk scores corresponding to the cognitive health metrics for the inquiring user, the set of cognitive risk scores further corresponding to motor vehicle risk of the inquiring user based on the cognitive health metrics as determined from the second response data; and

based on the motor vehicle risk of the inquiring user, generate a risk mitigation policy package for the inquiring user on an interactive user interface displayed on the computing device of the inquiring user, the interactive user interface enabling the inquiring user to select a particular risk mitigation policy from the risk mitigation policy package.

2. The computing system of claim 1, wherein the cognitive health metrics comprise at least one of spatial reasoning ability, motor function, word-finding and language processing ability, memory and recall, or reaction time.

3. The computing system of claim 1, wherein each risk mitigation policy in the risk mitigation policy package for the inquiring user is customized for the inquiring user based on the motor vehicle risk of the inquiring user as determined from the second response data.

4. The computing system of claim 1, wherein risk mitigation policy in the risk mitigation policy package for the inquiring user is individually priced based on the motor vehicle risk of the inquiring user as determined from the second response data.

5. The computing system of claim 1, wherein the risk mitigation policy package is generated for the inquiring user based on an underwriting class of the user as determined from the motor vehicle risk of the inquiring user, which is determined from the second response data.

6. The computing system of claim 1, wherein execution of the correlation model using the first response data causes the computing

system to test an accuracy of the correlation model against the motor vehicle records of the plurality of control base users.

7. A non-transitory computer readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to:

communicate, over one or more networks, with computing devices of users of a cognitive-based risk assessment service;

access, over the one or more networks, motor vehicle records of a plurality of control base users;

provide, over the one or more networks, a cognitive assessment test to computing devices of the plurality of control base users;

receive, over the one or more networks, first response data from the computing devices of the plurality of control base users, the first response data corresponding to the plurality of the control base users providing responses to each cognitive quiz problem of the cognitive assessment test;

execute a correlation model to (i) based on the first response data from each control base user, generate a set of cognitive risk scores for the control base user, the set of cognitive risk scores corresponding to a number of cognitive health metrics of the control base user, and (ii) determine a set of correlations between the cognitive health metrics of the plurality of control base users and vehicle accident risk as indicated in the motor vehicle records of the plurality of control base users;

provide, over the one or more networks, the cognitive assessment test to computing devices of inquiring users of the cognitive-based risk assessment service;

for each inquiring user, receive, over the one or more networks, second response data from the computing device of the inquiring user, the second response data corresponding to the inquiring user providing responses to each cognitive quiz problem in the cognitive assessment test;

using the second response data, execute the correlation model to determine a set of cognitive risk scores corresponding to the cognitive health metrics for the inquiring user, the set of cognitive risk scores

further corresponding to motor vehicle risk of the inquiring user based on the cognitive health metrics as determined from the second response data; and

based on the motor vehicle risk of the inquiring user, generate a risk mitigation policy package for the inquiring user on an interactive user interface displayed on the computing device of the inquiring user, the interactive user interface enabling the inquiring user to select a particular risk mitigation policy from the risk mitigation policy package.

8. The non-transitory computer readable medium of claim 7, wherein the cognitive health metrics comprise at least one of spatial reasoning ability, motor function, word-finding and language processing ability, memory and recall, or reaction time.

9. The non-transitory computer readable medium of claim 7, wherein each risk mitigation policy in the risk mitigation policy package for the inquiring user is customized for the inquiring user based on the motor vehicle risk of the inquiring user as determined from the second response data.

10. The non-transitory computer readable medium of claim 7, wherein risk mitigation policy in the risk mitigation policy package for the inquiring user is individually priced based on the motor vehicle risk of the inquiring user as determined from the second response data.

11. The non-transitory computer readable medium of claim 7, wherein the risk mitigation policy package is generated for the inquiring user based on an underwriting class of the user as determined from the motor vehicle risk of the inquiring user, which is determined from the second response data.

12. The non-transitory computer readable medium of claim 7, wherein execution of the correlation model using the first response data causes the computing system to test an accuracy of the correlation model against the motor vehicle records of the plurality of control base users.

13. A computer-implemented method of implementing a cognitive-based risk assessment service, the method being performed by one or more processors and comprising:

- communicating, over one or more networks, with computing devices of users of a cognitive-based risk assessment service;
- accessing, over the one or more networks, motor vehicle records of a plurality of control base users;
- providing, over the one or more networks, a cognitive assessment test to computing devices of the plurality of control base users;
- receiving, over the one or more networks, first response data from the computing devices of the plurality of control base users, the first response data corresponding to the plurality of the control base users providing responses to each cognitive quiz problem of the cognitive assessment test;
- executing a correlation model to (i) based on the first response data from each control base user, generate a set of cognitive risk scores for the control base user, the set of cognitive risk scores corresponding to a number of cognitive health metrics of the control base user, and (ii) determine a set of correlations between the cognitive health metrics of the plurality of control base users and vehicle accident risk as indicated in the motor vehicle records of the plurality of control base users;
- providing, over the one or more networks, the cognitive assessment test to computing devices of inquiring users of the cognitive-based risk assessment service;
- for each inquiring user, receiving, over the one or more networks, second response data from the computing device of the inquiring user, the second response data corresponding to the inquiring user providing responses to each cognitive quiz problem in the cognitive assessment test;
- using the second response data, executing the correlation model to determine a set of cognitive risk scores corresponding to the cognitive health metrics for the inquiring user, the set of cognitive risk scores further corresponding to motor vehicle risk of the inquiring user based on

the cognitive health metrics as determined from the second response data; and

based on the motor vehicle risk of the inquiring user, generating a risk mitigation policy package for the inquiring user on an interactive user interface displayed on the computing device of the inquiring user, the interactive user interface enabling the inquiring user to select a particular risk mitigation policy from the risk mitigation policy package.

14. The method of claim 13, wherein the cognitive health metrics comprise at least one of spatial reasoning ability, motor function, word-finding and language processing ability, memory and recall, or reaction time.

15. The method of claim 13, wherein each risk mitigation policy in the risk mitigation policy package for the inquiring user is customized for the inquiring user based on the motor vehicle risk of the inquiring user as determined from the second response data.

16. The method of claim 13, wherein risk mitigation policy in the risk mitigation policy package for the inquiring user is individually priced based on the motor vehicle risk of the inquiring user as determined from the second response data.

17. The method of claim 13, wherein the risk mitigation policy package is generated for the inquiring user based on an underwriting class of the user as determined from the motor vehicle risk of the inquiring user, which is determined from the second response data.

18. The method of claim 13, wherein execution of the correlation model using the first response data causes the computing system to test an accuracy of the correlation model against the motor vehicle records of the plurality of control base users.