

WE CLAIM:

1. An artificial intelligent system for identifying a drunk passenger of a car hailing order, comprising:

at least one storage medium including a set of instructions for identifying a drunk passenger of a car hailing order; and

at least one processor in communication with the storage medium, wherein when executing the set of instructions, the at least one processor is directed to:

obtain a plurality of samples from historical car hailing orders stored in a database;

for each of the plurality of samples, using an application, extract a plurality of features including a passenger feature set, a driver feature set, and an order feature set, wherein the order feature set includes drunk-hotspot-relating features; and

train a preliminary classification model based on the plurality of features and the plurality of samples to obtain a drunk model.

2. The system of claim 1, wherein the plurality of samples includes a positive sample set and a negative sample set, wherein

the positive sample set includes a plurality of historical drunk car hailing orders, and

the negative sample set includes a plurality of historical non-drunk car hailing orders.

3. The system of claim 1 or 2, wherein the passenger feature set includes a random passenger's essential features and features relating to the random passenger's historical orders,

the driver feature set includes a random driver's essential features and features relating to the random driver's historical orders, and
the order feature set further includes a random order's essential features.

4. The system of any one of claims 1-3, wherein the at least one processor is further directed to:

identify a plurality of drunk hotspots based on a plurality of historical designated-driving orders.

5. The system of claim 4, wherein to identify the plurality of drunk hotspots, the at least one processor is further directed to:

obtain a plurality of historical drunk designated-driving orders from the plurality of historical designated-driving orders, each of the plurality of historical drunk designated-driving orders including a start location;

identify a plurality of areas based on the start locations of the plurality of historical drunk designated-driving orders; and

for each of the plurality of areas,

determine whether the area meets a predetermined condition, and

in response to a determination that the area meets the predetermined condition, designate the area as one drunk hotspot of the plurality of drunk hotspots.

6. The system of claim 5, wherein the predetermined condition includes at least one of:

a number of historical drunk designated-driving orders in the area is greater than a number threshold; or

a ratio of a number of historical drunk-complaint car hailing orders to a

number of historical drunk designated-driving orders is greater than a ratio threshold.

7. The system of any one of claims 1-6, wherein to extract the plurality of features, the at least one processor is further directed to:

for each of the plurality of samples,

identify a start location;

map the start location to a drunk hotspot; and

extract the drunk-hotspot-relating features based on the drunk hotspot.

8. The system of claim of any one of claims 1-7, wherein the preliminary classification model is a Gradient Boosted Decision Tree (GBDT) model.

9. The system of any one of claims 1-8, wherein the at least one processor is further directed to:

obtain a car hailing order from a passenger terminal of a passenger; and

determine whether the passenger is drunk based on the car hailing order and the drunk model.

10. The system of claim 9, wherein to determine whether the passenger is drunk, the at least one processor is further directed to:

obtain a drunk probability of the passenger, wherein the car hailing order is an input of the drunk model, and the drunk probability is an output of the drunk model;

determine whether the drunk probability is greater than a probability threshold; and

in response to a determination that the drunk probability is greater than the probability threshold, determine that the passenger is drunk.

11. The system of claim 9, wherein the at least one processor is further directed to:

in response to a determination that the passenger is drunk, send an alert to a driver terminal of a driver of the car hailing order, displayed on a driver interface of the driver terminal.

12. An artificial intelligent method for identifying a drunk passenger of a car hailing order, implemented on a computing device including at least one storage medium including a set of instructions, a data exchange port communicatively connected to a network, and at least one processor in communication with the storage medium, the method comprising:

obtaining a plurality of samples from historical car hailing orders stored in a database;

for each of the plurality of samples, using an application, extracting a plurality of features including a passenger feature set, a driver feature set, and an order feature set, wherein the order feature set includes drunk-hotspot-relating features; and

training a preliminary classification model based on the plurality of features and the plurality of samples to obtain a drunk model.

13. The method of claim 12, wherein the plurality of samples includes a positive sample set and a negative sample set, wherein

the positive sample set includes a plurality of historical drunk car hailing orders, and

the negative sample set includes a plurality of historical non-drunk car hailing orders.

14. The method of claim 12 or 13, wherein the passenger feature set includes a random passenger's essential features and features relating to the random passenger's historical orders,

the driver feature set includes a random driver's essential features and features relating to the random driver's historical orders, and

the order feature set further includes a random order's essential features.

15. The method of any one of claims 12-14, wherein the method further comprises:

identifying a plurality of drunk hotspots based on a plurality of historical designated-driving orders.

16. The method of claim 15, wherein the identifying the plurality of drunk hotspots comprises:

obtaining a plurality of historical drunk designated-driving orders from the plurality of historical designated-driving orders, each of the plurality of historical drunk designated-driving orders including a start location;

identifying a plurality of areas based on the start locations of the plurality of historical drunk designated-driving orders; and

for each of the plurality of areas,

determining whether the area meets a predetermined condition, and

in response to a determination that the area meets the predetermined condition, designating the area as one drunk hotspot of the plurality of drunk hotspots.

17. The method of claim 16, wherein the predetermined condition includes at least one of:

- a number of historical drunk designated-driving orders in the area is greater than a number threshold; or

- a ratio of a number of historical drunk-complaint car hailing orders to a number of historical drunk designated-driving orders is greater than a ratio threshold.

18. The method of any one of claims 12-17, wherein the extracting the plurality of features comprises:

- for each of the plurality of samples,

- identifying a start location;

- mapping the start location to a drunk hotspot; and

- extracting the drunk-hotspot-relating features based on the drunk hotspot.

19. The method of any one of claims 12-18, wherein the preliminary classification model is a Gradient Boosted Decision Tree (GBDT) model.

20. The method of any one of claims 12-19, wherein the method further comprises:

- obtaining a car hailing order from a passenger terminal of a passenger;
- and

- determining whether the passenger is drunk based on the car hailing order and the drunk model.

21. The method of claim 20, wherein the determining whether the passenger is drunk comprises:

- obtaining a drunk probability of the passenger, wherein the car hailing order is an input of the drunk model, and the drunk probability is an output of the drunk model;

- determining whether the drunk probability is greater than a probability threshold; and

- in response to a determination that the drunk probability is greater than the probability threshold, determining that the passenger is drunk.

22. The method of claim 20, wherein the method further comprises:

- in response to a determination that the passenger is drunk, sending an alert to a driver terminal of a driver of the car hailing order, displayed on a driver interface of the driver terminal.

23. A non-transitory readable medium, comprising at least one set of instructions for identifying a drunk passenger of a car hailing order, wherein when executed by at least one processor of an electrical device, the at least one set of instructions directs the at least one processor to perform a method, the method comprising:

- obtaining a plurality of samples from historical car hailing orders stored in a database;

- for each of the plurality of samples, using an application, extracting a plurality of features including a passenger feature set, a driver feature set, and an order feature set, wherein the order feature set includes drunk-hotspot-relating features; and

- training a preliminary classification model based on the plurality of features and the plurality of samples to obtain a drunk model.

24. A system for identifying a drunk passenger of a car hailing order, comprising a model training module, the model training module is configured to:

 obtain a plurality of samples from historical car hailing orders stored in a database;

 for each of the plurality of samples, using an application, extract a plurality of features including a passenger feature set, a driver feature set, and an order feature set, wherein the order feature set includes drunk-hotspot-relating features;
and

 train a preliminary classification model based on the plurality of features and the plurality of samples to obtain a drunk model.