THE INVENTION CLAIMED IS:

1. A computer-implemented method for generating and applying a predictive wait time estimate using predictive modeling, the method comprising:

receiving, with at least one processor, initial transaction data representative of a plurality of transactions between a plurality of transaction accounts and at least one merchant completed during a sample time period, the initial transaction data comprising, for each transaction of the plurality of transactions, a transaction time and a transaction value;

generating, with at least one processor and based at least partially on the initial transaction data, for each subinterval of the sample time period, training data comprising at least one of the following: service rate during the subinterval, number of transactions during the subinterval, total transaction value during the subinterval, mean transaction value during the subinterval, year, month, day of week, or any combination thereof;

generating, with at least one processor and based at least partially on the training data of the sample time period, a predictive model that generates an output of arrival rate for an input comprising at least one time parameter; and

generating, with at least one processor and using the predictive model, the predictive wait time estimate for a designated time, wherein the predictive wait time estimate is at least partially based on the relationship of a queue length at the designated time to the service rate at the designated time, and wherein the queue length at the designated time is determined at least partially by an initial queue length at a start time and differences in the arrival rate and the service rate for each subinterval from the start time to the designated time.

2. The method of claim 1, further comprising:

receiving, with at least one processor, input of the designated time from a display device of a transaction account holder or a merchant; and

in response to receiving the input of the designated time, transmitting, with at least one processor, the generated predictive wait time estimate to the display device for presentation.

3. The method of claim 2, further comprising:

transmitting to the display device, with at least one processor, a plurality of merchants comprising the at least one merchant for presentation and selection; and

receiving, with at least one processor, from the display device a selection of the at least one merchant.

4. The method of claim 1, wherein the designated time is a current time, the method further comprising:

receiving, with at least one processor, new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a time interval preceding up to the current time, the new transaction data comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

generating, with at least one processor, the service rate based at least partially on a relationship of a total transaction value during the time interval preceding up to the current time to a mean transaction value for the time interval preceding up to the current time.

5. The method of claim 1, further comprising:

receiving at predetermined intervals, with at least one processor, new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a new sample time period, the new transaction data comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

re-generating, with at least one processor and based at least partially on the new transaction data, the training data, the predictive model, and the predictive wait time estimate.

6. The method of claim 1, further comprising, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generating and transmitting, with at least one processor, a communication to at least one transaction account holder comprising an offer for a reduced service or product price for the at least one merchant.

7. The method of claim 1, further comprising, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generating and transmitting, with at least one processor, a communication to at least one merchant system comprising an alert configured to cause the at least one merchant system to take action to increase its corresponding service rate.

8. The method of claim 1, further comprising, in response to determining that the predictive wait time estimate is less than or equal to a predetermined minimum wait time for the at least one merchant, generating and transmitting, with at least one processor, a communication to at least one transaction account holder comprising an advertisement for the at least one merchant.

9. A system for generating and applying a predictive wait time estimate using predictive modeling, the system comprising at least one server computer including at least one processor, the at least one server computer programmed and/or configured to:

receive initial transaction data representative of a plurality of transactions between a plurality of transaction accounts and at least one merchant completed during a sample time period, the initial transaction data comprising, for each transaction of the plurality of transactions, a transaction time and a transaction value;

generate, based at least partially on the initial transaction data, for each subinterval of the sample time period, training data comprising at least one of the following: service rate during the subinterval, number of transactions during the subinterval, total transaction value during the subinterval, mean transaction value during the subinterval, year, month, day of week, or any combination thereof;

generate, based at least partially on the training data of the sample time period, a predictive model that generates an output of arrival rate for an input comprising at least one time parameter; and

generate, using the predictive model, the predictive wait time estimate for a designated time, wherein the predictive wait time estimate is at least partially based on the relationship of a queue length at the designated time to the service rate at the designated time, and wherein the queue length at the designated time is determined at least partially by an initial queue length at a start time and differences

in the arrival rate and the service rate for each subinterval from the start time to the designated time.

10. The system of claim 9, the at least one server computer further programmed and/or configured to:

receive input of the designated time from a display device of a transaction account holder or a merchant; and

in response to receiving the input of the designated time, transmit the generated predictive wait time estimate to the display device for presentation.

11. The system of claim 10, the at least one server computer further programmed and/or configured to:

transmit to the display device a plurality of merchants comprising the at least one merchant for presentation and selection; and

receive from the display device a selection of the at least one merchant.

12. The system of claim 9, wherein the designated time is a current time, the at least one server computer further programmed and/or configured to:

receive new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a time interval preceding up to the current time, the new transaction data comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

generate the service rate based at least partially on a relationship of a total transaction value during the time interval preceding up to the current time to a mean transaction value for the time interval preceding up to the current time.

13. The system of claim 9, the at least one server computer further programmed and/or configured to:

receive at predetermined intervals new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a new sample time period, the new transaction data comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

re-generate, based at least partially on the new transaction data, the training data, the predictive model, and the predictive wait time estimate.

14. The system of claim 9, the at least one server computer further programmed and/or configured to, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generate and transmit a communication to at least one transaction account holder comprising an offer for a reduced service or product price for the at least one merchant.

15. The system of claim 9, the at least one server computer further programmed and/or configured to, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generate and transmit a communication to at least one merchant system comprising an alert configured to cause the at least one merchant system to take action to increase its corresponding service rate.

16. The system of claim 9, the at least one server computer further programmed and/or configured to, in response to determining that the predictive wait time estimate is less than or equal to a predetermined minimum wait time for the at least one merchant, generate and transmit a communication to at least one transaction account holder comprising an advertisement for the at least one merchant.

17. A computer program product for generating and applying a predictive wait time estimate using predictive modeling, the computer program product comprising at least one non-transitory computer-readable medium including program instructions that, when executed by at least one processor, cause the at least one processor to:

receive initial transaction data representative of a plurality of transactions between a plurality of transaction accounts and at least one merchant completed during a sample time period, the initial transaction data comprising, for each transaction of the plurality of transactions, a transaction time and a transaction value;

generate, based at least partially on the initial transaction data, for each subinterval of the sample time period, training data comprising at least one of the

following: service rate during the subinterval, number of transactions during the subinterval, total transaction value during the subinterval, mean transaction value during the subinterval, year, month, day of week, or any combination thereof;

generate, based at least partially on the training data of the sample time period, a predictive model that generates an output of arrival rate for an input comprising at least one time parameter; and

generate, using the predictive model, the predictive wait time estimate for a designated time, wherein the predictive wait time estimate is at least partially based on the relationship of a queue length at the designated time to the service rate at the designated time, and wherein the queue length at the designated time is determined at least partially by an initial queue length at a start time and differences in the arrival rate and the service rate for each subinterval from the start time to the designated time.

18. The computer program product of claim 17, wherein the program instructions further cause the at least one processor to:

receive input of the designated time from a display device of a transaction account holder or a merchant; and

in response to receiving the input of the designated time, transmit the generated predictive wait time estimate to the display device for presentation.

19. The computer program product of claim 18, wherein the program instructions further cause the at least one processor to:

transmit to the display device a plurality of merchants comprising the at least one merchant for presentation and selection; and

receive from the display device a selection of the at least one merchant.

20. The computer program product of claim 17, wherein the designated time is a current time, and wherein the program instructions further cause the at least one processor to:

receive new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a time interval preceding up to the current time, the new transaction data

comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

generate the service rate based at least partially on a relationship of a total transaction value during the time interval preceding up to the current time to a mean transaction value for the time interval preceding up to the current time.

21. The computer program product of claim 17, wherein the program instructions further cause the at least one processor to:

receive at predetermined intervals new transaction data representative of one or more transactions between one or more transaction accounts and the at least one merchant completed during a new sample time period, the new transaction data comprising, for each transaction of the one or more transactions, a transaction time and a transaction value; and

re-generate, based at least partially on the new transaction data, the training data, the predictive model, and the predictive wait time estimate.

22. The computer program product of claim 17, wherein the program instructions further cause the at least one processor to, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generate and transmit a communication to at least one transaction account holder comprising an offer for a reduced service or product price for the at least one merchant.

23. The computer program product of claim 17, wherein the program instructions further cause the at least one processor to, in response to determining that the predictive wait time estimate is greater than or equal to a predetermined threshold wait time for the at least one merchant, generate and transmit a communication to at least one merchant system comprising an alert configured to cause the at least one merchant system to take action to increase its corresponding service rate.

24. The computer program product of claim 17, wherein the program instructions further cause the at least one processor to, in response to determining that the predictive wait time estimate is less than or equal to a predetermined minimum

wait time for the at least one merchant, generate and transmit a communication to at least one transaction account holder comprising an advertisement for the at least one merchant.