

WHAT IS CLAIMED IS:

1. A computer-implemented method, comprising:
 - receiving, by a computing device, an authorization request message for a transaction associated with an account;
 - determining whether historical transaction data associated with the account is stored in a cache accessible to the computing device;
 - when the historical transaction data is stored in the cache:
 - retrieving, by the computing device, the historical transaction data associated with the account from the cache; and
 - performing, by the computing device, at least one operation in response to receiving the authorization request message, the at least one operation utilizing the historical transaction data retrieved; and
 - when the historical transaction data is not stored in the cache:
 - obtaining, by the computing device, the historical transaction data associated with the account from a historical transaction database;
 - and
 - performing, by the computing device, at least one operation in response to receiving the authorization request message, the at least one operation utilizing the historical transaction data obtained from the historical transaction database.
2. The computer-implemented method of claim 1, further comprising:
 - identifying, by the computing device utilizing a predictive model, one or more accounts from a plurality of accounts, the one or more accounts being identified by the predictive model as being likely to be utilized to conduct one or more transactions within a future time period, the predictive model being trained based at least in part on historical transaction data associated with the plurality of accounts;

obtaining, by the computing device from a data store, a portion of the historical transaction data, the portion of the historical transaction data corresponding to transactions conducted utilizing the one or more accounts over a second period of time; and

storing, at the computing device, the portion of the historical transaction data within the cache.

3. The computer-implemented method of claim 2, further comprising updating the historical transaction data with transaction data associated with authorization request message, wherein the predictive model is updated based at least in part on the historical transaction data as updated.

4. The computer-implemented method of claim 2, wherein identifying the one or more accounts, obtaining the portion of the historical transaction data, and storing the portion of the historical transaction data, are performed in response to receiving the authorization request message.

5. The computer-implemented method of claim 2, wherein identifying the one or more accounts, obtaining the portion of the historical transaction data, and storing the portion of the historical transaction data, are performed periodically.

6. The computer-implemented method of claim 2, further comprising updating the historical transaction data with transaction data of the authorization request message, wherein the one or more accounts are identified from the plurality of accounts subsequent to the historical transaction data being updated with the transaction data.

7. The computer-implemented method of claim 2, wherein the historical transaction data identifies a number of the plurality of accounts that have historically been utilized within a particular historical time period.

8. The computer-implemented method of claim 7, wherein the number of the plurality of accounts are determined to have conducted over a threshold percentage of transactions occurring within the particular historical time period.

9. The computer-implemented method of claim 1, wherein the at least one operation comprises calculating a risk score for the authorization request message.

10. The computer-implemented method of claim 1, wherein the computing device is a processing network computer.

11. A processing network computer, comprising:
a processor; and
a computer readable medium, the computer readable medium comprising code, executable by the processor, for implementing a method comprising:
receiving an authorization request message for a transaction associated with an account;
determining whether historical transaction data associated with the account is stored in a cache accessible to the processing network computer;
when the historical transaction data is stored in the cache:
retrieving the historical transaction data associated with the account from the cache; and
performing at least one operation in response to receiving the authorization request message, the at least one operation utilizing the historical transaction data retrieved; and
when the historical transaction data is not stored in the cache:
obtaining the historical transaction data associated with the account from a historical transaction database; and

performing at least one operation in response to receiving the authorization request message, the at least one operation utilizing the historical transaction data obtained from the historical transaction database.

12. The processing network computer of claim 11, the method further comprising:

identifying, utilizing a predictive model, one or more accounts from a plurality of accounts, the one or more accounts being identified by the predictive model as being likely to be utilized to conduct one or more transactions within a future time period, the predictive model being trained based at least in part on historical transaction data associated with the plurality of accounts;

obtaining, from a data store, a portion of the historical transaction data, the portion of the historical transaction data corresponding to transactions conducted utilizing the one or more accounts over a second period of time; and

storing the portion of the historical transaction data within the cache.

13. The processing network computer of claim 12, the method further comprising updating the historical transaction data with transaction data associated with the authorization request message, wherein the predictive model is updated based at least in part on the historical transaction data as updated.

14. The processing network computer of claim 12, wherein identifying the one or more accounts, obtaining the portion of the historical transaction data, and storing the portion of the historical transaction data, are performed in response to receiving the authorization request message.

15. The processing network computer of claim 12, wherein identifying the one or more accounts, obtaining the portion of the historical transaction data, and storing the portion of the historical transaction data, are performed periodically.

16. The processing network computer of claim 12, the method further comprising updating the historical transaction data with transaction data of the authorization request message, wherein the one or more accounts are identified from the plurality of accounts subsequent to the historical transaction data being updated with the transaction data.

17. The processing network computer of claim 12, wherein the predictive model is trained utilize unsupervised machine learning techniques.

18. The processing network computer of claim 12, wherein the historical transaction data identifies a number of the plurality of accounts that have historically been utilized within a particular historical time period.

19. The processing network computer of claim 18, wherein the number of the plurality of accounts are determined to have conducted over a threshold percentage of transactions occurring within the particular historical time period.

20. The processing network computer of claim 11, wherein the at least one operation comprises calculating a risk score for the authorization request message.