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(54) Title: SYSTEM FOR DESIGNING AND VALIDATING FINE GRAINED EVENT DETECTION RULES

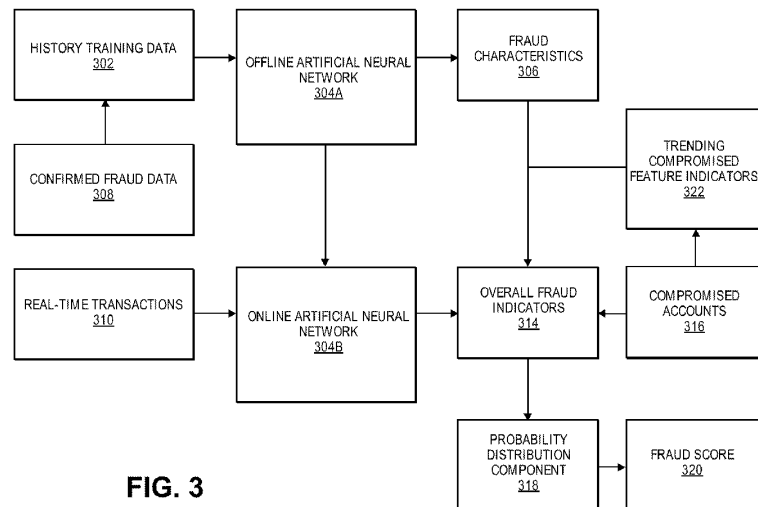


FIG. 3

(57) Abstract: A method includes receiving historical interaction data, which includes a plurality of historical interactions. Each historical interaction is associated with a plurality of data fields. The method includes assigning a plurality of weights to the plurality of data fields, generating a neural network using the plurality of weights and the plurality of data fields, identifying a first plurality of feature indicators indicative of a first class, the first class being different from a second class; receiving a second plurality of feature indicators derived from data relating to compromised accounts, updating, a probability distribution component using the first plurality of feature indicators and the second plurality of feature indicators, and receiving current data for an interaction. The method also includes applying the probability distribution component to the current data, and scoring the interaction using the probability distribution component.

[Continued on next page]

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