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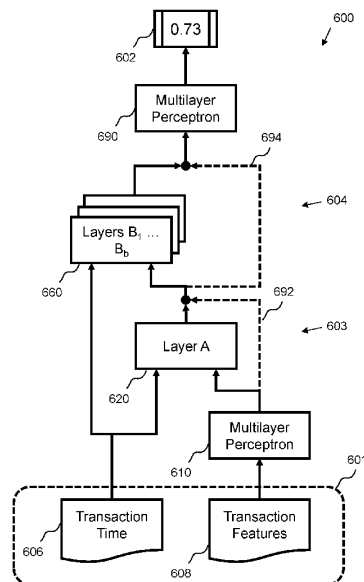


FIG. 6A

(57) Abstract: An example machine learning system for processing data associated with a transaction is described. The machine learning system has a first processing stage with a recurrent neural network architecture. The recurrent neural network architecture has a forget gate to modify state data for a previous iteration based on data representing a time difference between a proposed transaction and a prior transaction. The machine learning system also has a second processing stage with an attention neural network architecture communicably coupled to the first processing stage. The machine learning system is configured to map output data from the second processing stage to a scalar value representative of a likelihood that the proposed transaction presents an anomaly within a sequence of actions. The scalar value is used to determine whether to approve or decline the proposed transaction.

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