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(54) **Title:** SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR ANOMALY DETECTION IN MULTIVARIATE TIME SERIES

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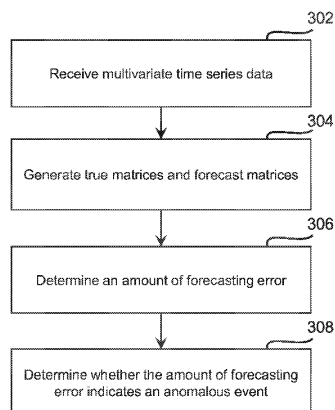


FIG. 3

(57) **Abstract:** Provided is a system for detecting an anomaly in a multivariate time series that includes at least one processor programmed or configured to receive a dataset of a plurality of data instances, wherein each data instance comprises a time series of data points, determine a set of target data instances based on the dataset, determine a set of historical data instances based on the dataset, generate, based on the set of target data instances, a true value matrix, a true frequency matrix, and a true correlation matrix, generate a forecast value matrix, a forecast frequency matrix, and a forecast correlation matrix based on the set of target data instances and the set of historical data instances, determine an amount of forecasting error, and determine whether the amount of forecasting error corresponds to an anomalous event associated with the dataset of data instances. Methods and computer program products are also provided.

[Continued on next page]

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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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