A Novel Type Of Time Series Type Forecasting

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Technical Note

Abstract

In this research investigation, the author has detailed a novel Time series type of forecasting.

Theory

Given a Time Series Set $S = \{y_1, y_2, y_3, \ldots\ldots\ldots, y_{n-1}, y_n\}$, we write y_{n+1} as follows:

$$y_{n+1} = Condense \left\{ \overbrace{\sum_{i=1}^{n} \sum_{\substack{j=1 \\ j \neq i}}^{n} y_i \{C(y_i, y_j)\}}^{R} \right\}$$

where $C(y_i, y_j) = \left\{ \dfrac{Smaller \ \ of \ (y_i, y_j)}{Larger \ \ of \ (y_i, y_j)} \right\}$

and the Condense function works on the terms in R as follows:

Considering any two terms of the sum term R of the following kind

$a\{C(y_i, y_j)\} + b\{C(y_j, y_i)\}$ where $a < b$ we reassign the sum $a\{C(y_i, y_j)\} + b\{C(y_j, y_i)\}$ as

$\{a\{C(y_i, y_j)\} + b\{C(y_j, y_i)\}\} \mapsto a\{C(y_i, y_j)\} + (b-a)\{\{C(y_i, y_j)\} or \{C(y_j, y_i)\}\}$ and re-compute the R term.

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