

# 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  $S = \{y_1, y_2, y_3, \dots, y_{n-1}, y_n\}$ , we write  $y_{n+1}$  as follows:

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

$$\text{where } C(y_i, y_j) = \begin{cases} \text{Smaller of } (y_i, y_j) \\ \text{Larger of } (y_i, y_j) \end{cases}$$

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

Considering every 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

$\{a\{C(y_i, y_j)\} + b\{C(y_j, y_i)\}\} \mapsto a\{C(y_i, y_j)\} + (b-a)\{C(y_i, y_j)\} \text{ or } \{C(y_j, y_i)\}$  and re-

compute the R term.

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