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6. Process or Product Monitoring and Control

6.4. Introduction to Time Series Analysis

Time
series
methods
take into
account
possible
internal
structure
in the data

Time series data often arise when monitoring industrial processes or tracking corporate business metrics. The essential difference between modeling data via time series methods or using the process monitoring methods discussed earlier in this chapter is the following:

Time series analysis accounts for the fact that data points taken over time may have an internal structure (such as autocorrelation, trend or seasonal variation) that should be accounted for.

This section will give a brief overview of some of the more widely used techniques in the rich and rapidly growing field of time series modeling and analysis.

Contents for this section

Areas covered are:

- 1. Definitions, Applications and Techniques
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- 3. What is Exponential Smoothing?
 - 1. Single Exponential Smoothing
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- 4. Univariate Time Series Models
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 - 5. Box-Jenkins Approach
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- 5. Multivariate Time Series Models
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