Detecting and Correcting Outliers Overview

Detecting and Correcting Outliers · https://www.forecastpro.com/documentation/forecast-pro-trac/detecting-and-correcting-outliers/detecting-and-correcting-outliers-overview/

An outlier is a data point that falls outside of the expected range of the data (i.e., it is an unusually large or small data point). If you are forecasting a time series that contains an outlier there is a danger that the outlier could have a significant impact on the forecast.

One solution to this problem is to screen the historical data for outliers and replace them with more typical values prior to generating the forecasts. This process is referred to as outlier detection and correction.

Correcting for a severe outlier (or building an event model for the time series if the cause of the outlier is known) will often improve the forecast. However, if the outlier is not truly severe, correcting for it may do more harm than good. When you correct an outlier, you are rewriting the history to be smoother than it actually was, and this will change the forecasts and narrow the confidence limits. This may result in poor forecasts and unrealistic confidence limits when the correction was not necessary.

It is the author’s opinion that outlier correction should be performed sparingly and that detected outliers should be individually reviewed by the forecaster to determine whether a correction is appropriate.

Forecast Pro incorporates an automated algorithm to detect and (optionally) correct outliers. In this lesson we will explore its operation.