1. The Time Series

Chart

Description automatically generated

1. Trend Analysis

Using a 1 year rolling window; Bollinger bands and rolling average:

A picture containing timeline

Description automatically generated

* Clear downward time trend.

1. Outlier Detection

Chart, histogram

Description automatically generated

Chart, scatter chart

Description automatically generated

Chart, line chart

Description automatically generated

Using support vector machine algorithm:

Chart

Description automatically generated

Chart

Description automatically generated

1. Stationarity Test

Graphical user interface, chart

Description automatically generated

Stabilize the mean by differencing the time-series

Timeline

Description automatically generated

1. Seasonality/Decomposition Analysis

Chart

Description automatically generated with medium confidence

1. F
2. F
3. f