**Seasonal decomposition:**

The seasonal decomposition technique assumes that a time series can be expressed as the sum of these components:

Trend: The trend component represents the long-term, non-seasonal pattern or direction of the data. It captures the overall upward or downward movement of the time series over an extended period. The trend can be linear, exponential, or follow some other functional form.

Seasonality: The seasonal component captures the repetitive patterns or cycles that occur at fixed intervals within the data. These patterns could be daily, weekly, monthly, or any other regular time period. Seasonality represents the systematic, predictable fluctuations that occur due to factors like seasons, holidays, or other calendar-related effects.

Residual (Irregular): The residual component, also known as the irregular or noise component, represents the random or unpredictable fluctuations that remain in the data after removing the trend and seasonal components. It represents the unexplained or residual variation that cannot be attributed to the trend or seasonality.

This decomposition allows for a better understanding of the data, identification of patterns, and potential forecasting or modeling of the individual components.