Start-Tech Academy

Winter’s Method

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- In an actual situation trend and seasonality are constantly changing
- Winter’s Method changes trend and seasonal index estimates during each period and therefore has a better chance of keeping up with changes than methods discussed earlier which use constant estimates of trend and seasonal indices.
- Winter method allows different weightages to the recent and old observations

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$$L_t = alp(x_t) / (s_{t-c}) + (1 - alp)(L_{t-1} * T_{t-1})$$

$$T_t = bet(L_t / L_{t-1}) + (1 - bet)\ T_{t-1}$$

$$S_t = gam(x_t / L_t) + (1 - gam)s_{(t-c)}$$

- Lt = Level of series
- Tt = Trend of series
- St = Seasonal index for current month
- alp, bet, and gam are called smoothing parameters
- c equals the number of periods in a seasonal cycle
- xt equals the observed value of the time series at time t.